

**SUPERINTENDENT'S ANNUAL REPORT**

1993



**JOSHUA TREE NATIONAL MONUMENT**

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## **SUPERINTENDENT'S ANNUAL REPORT 1993 JOSHUA TREE NATIONAL MONUMENT**

### **INTRODUCTION**

1993 was a productive and extremely busy year for Joshua Tree National Monument. Work continued on the General Management Plan (GMP), Interpretive Prospectus, and Climbing Management Plan. External threats such as the Eagle Mountain landfill and the hydroelectric project continued to occupy much of the staff's time.

A draft of the General Management Plan was reviewed internally during the summer. The GMP schedule was delayed due to a change in the team captain assignment. The document is expected to be released for public comment in the summer of 1994.

The monument's first Climbing Management Plan was approved in February. The plan introduced a new ban on bolting in wilderness areas of the monument. Controversy over the Climbing Management Plan generated over 200 letters protesting the ban. A lawsuit was threatened by the climbing community but never materialized. Two studies, biological and sociological, were initiated during the year. The research was designed to aid in developing management strategies for climbing activities.

A new environmental education center was completed at Black Rock Campground in Yucca Valley. The program was staffed during the school year and many new programs started. A new ranger office at Cottonwood was constructed. The Lost Horse apartment was converted into office space for interpreters and protection rangers.

There was a large turnover in management staff during the year. Superintendent David Moore retired in December after 34 years of government service. Chief Ranger, Paul Henry, transferred to FLETC in August and Chief of Resources Management, Bob Moon, transferred to the Rocky Mountain Regional Office in October. Kathy Tustanowski-Marsh transferred from the Grand Canyon into the Administrative Officer position. A new Criminal Investigator position was filled by Todd Swain.

1993 was an average weather year. There was a total of 4.37" of rain, barely exceeding the average of 4.10" per year. The highest temperature recorded for the year was 115° in August. The lowest temperature recorded was 27° in December. The wettest month was January with 2.66" of rain and the driest months were April, July and September with 0" of rain. Weather measurements were recorded at the Oasis Visitor Center in Twentynine Palms.

## **ADMINISTRATION**

The Administrative Division continued to report to the Management Assistant as a result of the reorganization made in FY92. The Administrative Officer position vacated by a retirement in December, 1992, was filled by Kathy Tustanowski-Marsh in March. The Budget/Fiscal Clerk was promoted to the next grade level of GS-5 and the Personnel Assistant was promoted to the next grade level of GS-7 which is the target level for both positions. The Office Automation Clerk GS-3 position was filled with a temporary NTE one year appointment by Gimma Hiland in March.

As in previous years the park grew in staff, visitation, and funding. All of these activities have increased the need for services provided by the administrative staff. In comparing the FTE and funding level of Joshua Tree to parks with similar figures our Administrative Division is short one to two positions and a grade level behind equal positions in the comparable parks. Office space is also at a premium for administrative operations. A strong commitment will be made to remedy these deficiencies in the future.

A new Leave Policy Management Directive was written and approved. The Computer Management Directive was rewritten as a result of input from the newly created ADP Committee. The ADP Committee was established to provide some support and direction to the park's ADP operation. Due in large part to the contributions of the Interpretive Division Clerk the committee concept is providing a minimum level of ADP support. Serious consideration needs to be given to the establishment of an ADP support position.

### **Budget and Finance**

For the 1993 fiscal year ending September 30, 1993, Joshua Tree National Monument was allocated an operating base of \$2,405,000. Annual assessments of \$63,700 were withdrawn against that amount. \$496,000 of the operating base was redistributed to offset allocation of no-year fee funding. Other funding available included the following:

<b><u>Miscellaneous</u></b>	
Incentive Awards	\$ 2,900
VIP	7,100
Hazardous Materials	5,000
Housing	25,000
Donations	24,700
GSA Reimbursement	30,600
<b><u>Protection</u></b>	
ARPA	3,000
Drug Investigations	70,200
Special Use Activities	23,500
PWE 178 Activity	11,000

<u>Firepro</u>	
Presuppression	50,000
Fairshare(Dispatch)	3,000
Permanent Staffing	73,100
Equipment Replacement Funds	16,000
Hazard Fuel Reduction	5,400
PWE 381/382 Activity	40,500
<u>Natural Resources</u>	
Air Quality	8,000
Guzzler Maintenance	2,500
Mine Revegetation	37,300
Nursery - Revegetation	55,700
Tortoise Study	1,100
Cost Share - Tractor	10,500
Alien Plant Removal	7,400
<u>Cultural Resources</u>	
Keys Ranch Historic Preservation	25,000
Backlog Cataloging	79,800
Museum Curation	62,000
Collection Room Addition	65,200
<u>Interpretive Exhibits Cyclic</u>	0
<u>Regular Cyclic</u>	
Reroof Building	26,400
Rehab Restrooms-HQVC	60,100
Replace Floor Covering	23,000
Blade Patch	100,000
Replace Picnic Tables	13,000
<u>Repair/Rehab</u>	
YCC Program	6,800
Rehab Cottonwood Well	6,000
Black Rock Earthquake Repair	53,400
<u>Equipment Replacement</u>	0
<b>TOTAL SPECIAL MONIES</b>	<b>1,034,200</b>
<b>TOTAL ONPS</b>	<b><u>2,341,000</u></b>
<b>TOTAL FY93 FUNDING(DIRECT/INDIRECT)</b>	<b>\$3,375,200</b>

A major achievement during FY93 was upgrading the Budget/Fiscal Clerk's computer and going on-line with FFS. Training was received from the Budget Assistant at Grand Canyon NP. This allowed for improved budget/fiscal activities which resulted in a more accurate and comfortable year end closing. The Budget/Fiscal Clerk received additional on-line training first hand from staff at the Accounting Operations Division office in Reston, Virginia. The Budget/Fiscal clerk has applied the information learned and has shared her knowledge with others which has improved the overall efficiency of the operation.

Fees collected at Joshua Tree totaled over \$860,000. This was a 13% increase from FY92. The cost of running the fee collection operation was \$180,100. This represents a 12.35 increase from FY92.

During FY93, 133 travel authorizations were processed from Joshua Tree accounts for a total of \$59,900. A Memorandum of Agreement was signed with American Express Travel to utilize their services for travel reservations. Seven permanent change of station moves were processed. This responsibility has been reassigned from the Procurement Agent to the Administrative Officer.

### Internal Controls

All necessary internal control audits were performed (third party draft, imprest, fee collection). No major deficiencies were noted. Minor deficiencies were corrected.

### Procurement

Again we saw a decrease in the number of purchase orders issued due to utilization of Third Party Drafts. By the end of FY93, 478 checks had been issued for a total of \$130,000. That is double the activity of FY92. 222 purchase orders were issued (as compared to 376 in FY92) for a total of \$346,300. We utilized blanket purchase agreements with 10 vendors which covered \$40,000 in purchases. Imprest fund purchases were active with 453 transactions being covered on 30 reimbursement vouchers for a total of \$21,100.

The Third Party Draft Site Manager is the Administrative Officer. The primary draft agent is the Superintendent's Secretary with the Maintenance Administrative Clerk as the backup. The primary Imprest Fund Cashier is the Superintendent's Secretary with the Budget/Fiscal Clerk as backup. The Purchasing Agent holds a Level I Warrant with the Administrative Officer serving as backup once her Level I Warrant is approved.

The Purchasing Agent conducted two half day procurement training sessions. Attendance was required for all individuals who signed the Procurement Integrity Act Certification.

### Property

The annual inventory was completed in April and two weapons inventories were completed within the year. A large backlog of property related work was identified during the inventory; items need numbers assigned, items need to be entered into PROP, revisions are needed on locations and

corrections made regarding custodial officers, as well as removal of backlog of items waiting to be surveyed. As a result of the backlog found during the inventory, the Office Automation Clerk was assigned to assist with property. Due to her diligence, one Certificate of Unserviceable Property and ten Reports of Survey were processed for a total of \$25,065. Two disposal documents were prepared for submittal to GSA. Property will be a major focus in FY94.

### Affirmative Action

Of the fifteen permanent positions filled during the year, eleven were male (73%) and four were female (27%). A total of 9 persons were employed seasonally during the calendar year 1993. A total of 47 persons were employed as temporaries. Of the total seasonal and temporaries, 59% were male, 41% were female, and 7% were minority.

### Awards

A total of 20 awards were issued to park employees for a total of \$7,945.

### Personnel

After a thorough review and updating, the Position Management Plan was submitted to region for approval. The Personnel Assistant represented the park in sponsoring a Time Card Training which was given by staff from Central Payroll. The Personnel Assistant also did an excellent job assisting the Administrative Officer provide employee orientation to the fire crew and other seasonal staff and volunteers.

69.7 FTE's were utilized in FY93. 38.62 were permanent with the remaining 31.08 non-permanent. 94 positions were occupied during 1993. Staffing at Joshua Tree National Monument during 1993 consisted of the positions shown on the attached personnel roster (end of report).

### Employee Assistance Program

A critical incident debriefing was conducted for protection and volunteer rescue personnel after five park visitors died in a series of climbing and traffic accidents during a short period in the spring. A professional counselor, on contract with the EAP, provided this session for about ten employees and volunteers.

## VISITOR PROTECTION

The Protection Division experienced major personnel changes during the year. The Chief Ranger, Paul Henry, transferred to FLETC as a Superintendent. Lost Horse District Ranger, Kip Knapp, transferred to Grand Teton National Park. Scott Stevens transferred from Delaware Water Gap NRA into the Lost Horse District Ranger position. Two new positions under drug funding were created: a Criminal Investigator filled by Todd Swain and a Park Ranger filled by Marion Damiano-Nittoli. Todd Swain's old position at Lost Horse was filled by Nina Burnell.

Joshua Tree National Monument once again experienced an increase in visitation. An increase of 13.6% over 1992 brought the total visitation for the park to 1,392,209 in 1993. Overnight use also increased from 263,588 in 1992 to 306,840 in 1993.

### Law Enforcement

Statistical information on Protection Division activities:

Kidnapping	1
Burglaries	4
Assaults	4
Larcenies	40
Arson	1
Vandalism	54
Weapons	34
DUI Arrests	3
Sex Offenses	1
Drug Laws	58
Liquor Laws	6
Disorderly Conduct	26
Number of Case Incidents	925
Number of Violation Notices	595
Traffic LE Incidents	132
Resource Violations	496
ARPA Violations	51
Monetary Loss to Govt. (Vandalism, Larceny, Burglary)	\$12,113.00
Search and Rescue Incidents	35
Emergency Medical Services	53
Film Permits	88
Filming Days	201
Commercial Use Licenses	28
Special Use Permits	15

## Fee Collection Operations

During 1993, the fee collection branch operated on a year round schedule with the exception of the Indian Cove station which was closed during the summer months. The fee management operating budget was \$180,100 with a total revenue generated of \$859,570. The benefit cost ratio for 1993 was a \$4.78 return for every dollar spent (4.78:1 or 478%).

The fee collection income of \$859,570 is broken down as follows:

Single Entry Vehicles	\$474,925
Per Person/Bus/Motorcycles	14,744
Joshua Tree Park Pass	27,435
Golden Eagle Passport	286,100
Camping - Non Mistix	36,731
Mistix - Reservation Sales	19,201
Overages	434

The following is a breakdown by station:

Cottonwood	\$207,236.80
Indian Cove	54,247.00
North Entrance	243,682.63
West Entrance	325,070.27
Black Rock	29,332.80

## Fire Management

The 1993 fire season was again a busy one for Joshua Tree and cooperators. While wildfire activity in the park was minimal, the park remained in extreme fire danger, with extended and uninterrupted "red flag warnings" occurring at an unusually high level. In addition, the park was deeply committed to the "Wildfire Siege of 1993", which devastated much of the Los Angeles Basin with unprecedented losses of life and property. At one point during the second wave of fires in September, both NPS engines stationed at the Black Rock Interagency Fire Center (BRIFC) were committed to the LA firefighting effort. During this period, Joshua Tree employed a record number of regular and "emergency" hire firefighters. In addition, the park contributed numerous other personnel in various support roles including staging manager, EMT, etc. Many red-carded employees at JOTR were kept in a high state of alert during this fire season and personnel from other Divisions, contributed to this effort in sometimes, non-traditional roles.

From an interagency point of view, operations at BRIFC continued to be efficient and cooperative. An Intraagency Agreement was approved by both agencies to cover operation and maintenance of the center. NPS and BLM personnel stationed at the center cooperated on numerous training and operational matters and further structural improvements were made to the center. The automatic dispatch plan managed by the Federal Interagency Communications Center continued to serve the

needs of the Black Rock interagency operations. The BLM area rangers established a new office in the stable area of the center.

Organizationally, the park fire program was reorganized in the fall and placed within the Protection Division. A new position, Backcountry Resources Management Specialist, GS 401-11, under the Chief Park Ranger, supervises the fire management program. The new Backcountry Ranger, Tom Gavin, joined the staff in August.

Operationally, many significant activities occurred in relation to the full implementation of the park Fire Management Plan. The USFS Pacific Southwest Research Station fire effects study on Joshua Tree mortality and seasonal effects of prescribed fire continued at the Nolina Cove study site; the second or fall experimental burn was successfully conducted in December with the winter burn scheduled for 1994. In addition, the park successfully burned approximately 100 acres of blackbrush fuels at Covington Flats, in accordance with the approved FMP. Considerable cooperation from other agencies and parks was received during this effort and the burns were highly successful (90 % fuel reduction). During prescribed fire operations, the park was able to refine and expand its burning prescriptions and blackline operations, to include the nighttime application of prescribed fire without scratch line support. NPS fire monitoring plots were established prior to the burn and read during the burn, in accordance with the Western Region Fire Monitoring Program; a WRO based monitoring team assisted the park with the pre- and post fire monitoring and analysis activities.

Additional funding for prescribed fire operations was requested in 1993 and to date, the FY94 program has been funded to the level of \$10,000. An additional 400-500 acres of blackbrush fuels reduction has been proposed in close proximity to Black Rock and the Yucca Valley interface, in accordance with the approved FMP.

From a training perspective, the regular firefighters and park FMO continued to receive a wide array of both formal and on-the-job training. The park FMO once again coordinated the 1993 Department of the Interior Engine Academy. In addition to their firefighting responsibilities, the FMO and regular fire crew participated in various related collateral duties including work on resource management service projects, EMS and SAR operations and physical training. In addition to her regular duties, the FIREPRO program clerk has contributed to numerous other significant park programs in 1993, including the park law enforcement and EMS programs. She also cross-trained and served as Division Program Clerk for eight weeks during the latter part of the year.

## **INTERPRETATION**

### **Interpretive Programs**

Interpretive activities and programs got off to a slow start in Fiscal Year 1993, as the potential for a funding shortage dictated not filling key seasonal interpretive positions. In January an increase from seasonal interpretive initiative funds was authorized for FY 93 and we were able to hire one field interpreter plus two full time and one part time environmental education program interpreters. Five permanent interpreters working at Joshua Tree this year were also fully involved with presentation of interpretive programs. Three visitor centers were open all year. Additional help from fee collection, Natural History Association, Student Conservation Association, and Volunteers in the Parks employees was required in order to fully staff these centers. With the increase in funding, the National Park Service was again able to conduct the Keys Ranch tours, which had been conducted by the Natural History Association since 1983. The NPS also again took over the environmental education program coordination which had been funded by the Association since 1984. Interpretive campfire or evening programs were offered in four campgrounds on weekends. Conducted walks were offered in approximately ten of the high visitor use areas of the park. During the year we had a tremendous increase in numbers of programs offered by our VIPs.

The following is a breakdown of programs offered and the number of visitors contacted:

Visitor Centers	203,416
Tours and Walks	3,560
Talks (NPS and VIP)	6,381
Environmental Education	5,104
Community Group Presentations	1,530
County Fair Booth	10,388
Roving Contacts	1,409
Special Programs	5,680

### **Radio Programs**

Public service announcements were again offered throughout the season from October through May, usually twice a week on two local stations. A special radio broadcast was presented on Cable Network Radio's Great Outdoors program, and an interview with a Park Interpreter was done on KDHI radio.

### **Bus Tours**

Park Interpreters, Association employees and VIPs continued to provide tour guide assistance on as many bus tours as possible this year.

## Environmental Education

For the first time in about twelve years the National Park Service was able to hire seasonal interpreters to present environmental education programs in the local schools and bring classes to the park. An increase of approximately 25% in student contacts was realized.

During the year the EE staff continued work on the Teacher's Guide to the Mojave Desert, working cooperatively with Death Valley, Lake Mead, and Bureau of Land Management personnel. By the end of the year the materials were in final draft form and being readied for submission for printing. Meetings and special activities included attending Morongo Unified School District Curriculum Committee Meetings for Science and Social Studies. A special environmental education program was presented to approximately 30 Curriculum Specialists from Riverside and San Bernardino County School Districts. EE staff members again participated in the educator's fair in the Coachella Valley this year and assisted in several Earth Day activities.

EE coordinator Carol Peterson visited Tumacacori National Monument where she observed environmental education classes presented to Spanish speaking students. She traveled on a Horace M. Albright Grant.

The Environmental Education center at Black Rock was completed and moved into. The new office space and conference room provides an excellent facility from which to coordinate the environmental education activities and meet with teachers and work groups.

Bilingual interpreter, Taylor Bucci, offered several environmental education programs for Spanish speaking classes this year. He spent Easter assisting the Bureau of Land Management with contacting groups near our south boundary, distributing our Spanish translation of the park brochure and explaining the land use differences of Park, State and BLM lands.

## Public Affairs, Special Events and Programs

During the ten day Riverside County Fair in Indio, park interpretive personnel and VIPs worked cooperatively with California State Park Rangers staffing a booth with National and State Park exhibits. In addition during the year we were involved with coordination and carrying out the following other special programs: hosted the Bryce Canyon Traveling photographic exhibit, conducted a special Earth Day activity on the U.S. Marine Corps Base, participated in the Earth Day activities at the Living Desert Reserve, presented NPS program and staffed a booth at the Environmental Exposition Fair at California State University at San Bernardino, held a special commemoration of the Joshua Tree establishment date and a special National Park Service birthday commemoration, conducted an art festival at the park on two spring weekends, and participated in the Welcome Home from Somalia Fair.

Special Welcome Aboard programs were initiated this year for newly assigned personnel on the Marine Corps Base. Contacts were made with Marines and their families explaining the significance of the park next door to the Marine Base, pointing out National Park Service policies, and inviting

these neighbors to visit their park. These became a continuing once a month activity.

A special star program was held at Hidden Valley on May 22, 1993, with over 200 members of various Astronomy Clubs participating. During the year interpretive and other park staff members participated in the Pioneer Days and Grubstakes Day parades and fairs. Park Interpreters again took brochures and other exhibit materials to the Patton Museum and assisted during the Veterans Day celebrations. Special outreach programs were offered to senior centers in the Coachella Valley. These were begun in the fall of 1993.

### Interpretive Projects

The Campground wayside exhibit project continued. Text and maps were reviewed by park staff, however the project was put on hold during the summer to wait for a final determination on the possible name change for the park. The Keys View waysides, although ready for production, were also put on hold based on the possibility of a park name change. The park name may be dropped from the latter panels in order to finish them early in 1994.

Three National Register Historic site signs were produced and installed at the Desert Queen Mine, the Pinto Wye Arrastra, and the Wall Street Mill. The park's YCC crew assisted Interpretation with the installation. Nature trail signing was completed for Hidden Valley, Cottonwood, and the Oasis of Mara nature trails. Again the YCC assisted with the removal of the old signs and installation of the new anodized aluminum signs on the Oasis of Mara trail, while VIPs and the SCA assisted with the installation of the others at Cottonwood and Hidden Valley.

National Park Service, Bureau of Land Management, Bureau of Reclamation, California State Fish and Wildlife, and Fort Erwin DOD personnel began interagency meetings this year developing desert tortoise exhibits, brochures and other materials. There appears a good likelihood that the Department of Defense will have some funding for traveling exhibits and other interpretive products on the desert tortoise.

### Special Projects

Coachella Valley High School students in a special advanced placement class, utilizing their bilingual skills, produced a Spanish translation of our park brochure.

### Personnel

During the year, Park Ranger (Interpretation) Jimmy Pritchett transferred to the Personnel Division of the Western Regional Office as Recruitment Specialist. Art Webster was reassigned to the Lost Horse District Interpreter position. Art Kidwell was hired as the Visitor Center Supervisor.

Chief Interpreter Bill Truesdell served in an acting detail as Chief Park Interpreter at Yosemite National Park from May 25 to September 4, 1993. Management Assistant Kathy Billings filled in as Acting Chief of Interpretation during his absence.

### Interpretive Planning

Interpretive personnel provided input and assisted with the review of the General Management Plan, Climbing Management Plan, and Interpretive Prospectus during the year.

NPS Interpreters from Joshua Tree and Santa Monica Mountains met with BLM, USFS, and other land management agency personnel at the University of California at Riverside to discuss efforts required by all agencies in order to educate the increasing numbers of Latino visitors to federal and state lands. Creating an understanding of the different land management agency policies and why there are different regulations will be the ultimate education goal of this group.

### Cooperating Association

During the year the Joshua Tree Natural History Association provided full time and part time seasonal employment assistance. This included sales/information desk staff, one environmental education specialist and three part time fee interpretive tour guides for Keys Ranch for the fall and winter until the NPS took over these activities.

The Association gross income for the year was over \$257,000 with approximately \$46,000 donated to the National Park Service. Funds were donated for the production of two issues of the park newspaper, new library publications, archival materials for the photo files, and environmental education supplies.

Association operating funds were also used to remodel the Oasis visitor center sales display area. By year's end the Association sales showed excellent increases due to the remodeling and the increase number of publications for sale.

The First Annual Natural History Association Art Festival was carried out on two consecutive weekends in the spring. This was a very successful activity with a tremendous amount of talent being illustrated. Over 1,500 people viewed the exhibited artwork.

### Volunteers in the Parks

This year our VIP program was bigger than ever. Volunteers included special group work parties, Community Service Workers, Boy Scout troops, equestrian patrol VIPs, Campground Hosts, Search and Rescue Team members, interpretive volunteers, revegetation work crews and desert tortoise survey team members. Over 450 VIPs assisted Joshua Tree this year. A VIP recognition barbecue was held during the spring. VIP Coordinator Art Webster attended a VIP priority setting and budget distribution meeting for the Western Region held in Santa Monica Mountains National Recreation Area. Again this year volunteer groups presented star programs at both Cottonwood Campground and the Hidden Valley area on a monthly basis.

## **RESOURCES MANAGEMENT**

### **Organization**

The Division of Resources Management was organized with branches for cultural resources, vegetation management, and wildlife/physical sciences. The Chief of Resources Management, Bob Moon, transferred in October to the Rocky Mountain Regional Office as the Chief of Natural Resources for the region. The position will be refilled in 1994. Professionalization funding for a GIS position was received in December. The position is expected to be filled in 1994.

### **Planning**

The Resources Management Plan was finalized and approved in 1993. The Climbing Management Plan (CMP) was approved in February. The plan introduced new management actions including a ban on bolting in wilderness areas. Climbing groups and individuals protested the ban and threatened to file a lawsuit against the new regulation. The CMP will be reviewed after current studies are completed.

### **Research**

Two studies were funded in 1993 to meet climbing management plan objectives. A biological study was contracted through CPSU with Rick Knight at Colorado State University. The final research paper should be completed in early 1994. A sociological study was also contracted through CPSU with George Wallace at Colorado State University. The first phase of the sociological study was completed in the fall. The second phase will begin in spring, 1994. Both studies are designed to examine resources impacts from recreational activities including rock climbing.

In 1992, a first raven census was performed in the eastern part of the Monument nearest to the proposed Eagle Mountain landfill. Results of this census were published in 1993. Ravens are significant because they have been shown to eat juvenile tortoises. Raven numbers have increased widely in southern deserts in response to human trash and litter. (Citation: Camp, R.J., R.L. Knight, and J.E. Freilich 1993. Common raven populations in Joshua Tree National Monument, California. *Western Birds* 24: 198-199.) In 1993, the census was repeated two additional times. Each census, involved nearly 80 miles of walking straight compass lines over extremely rugged terrain. This strenuous exercise was completed in early spring 1993, and again in late 1993 (and January 1994). Very low raven numbers were found, indicating this area to be among the most pristine areas in the southern California desert.

Dr. Pat Brown, working on a RRBS award of \$5,000 completed an inventory of mine shafts in the eastern Pinto Basin. She confirmed the presence of two Category II (Proposed for Listing) bats, the California Leaf Nosed Bat (*Macrotus californicus*) and the Mastiff Bat (*Eumops perotis californicus*). The study confirms that rare bats are resident in those areas that will be affected by the proposed Eagle Mountain Landfill. We are indebted to the California Highway Patrol for use of their helicopter to access very remote sites. Additional shafts were not studied because of time and distance

constraints.

In addition to the NPS funded research efforts, twelve unsolicited research projects were conducted by a diversity of scientists. Permits were issued for the following studies:

1. Phylogenetic study of the genus *Pritchardia* and a population genetics study of the palms from the various oases.
2. Collection, description, and naming of new species of Jerusalem Crickets in the monument.
3. Study of changes in various plant communities in Covington Flats.
4. Study of geology along Pinto Mountain fault.
5. Environmental factors affecting the population dynamics of the Joshua Tree.
6. Geologic framework of eastern transverse ranges including Joshua Tree National Monument.
7. Taxonomic revision of the genus *Dasymutilla*.
8. Spatial dynamics of Colorado desert plants.
9. Climatic variation and photosynthetic adaptation in warm desert plants.
10. Butterfly fauna of Joshua Tree National Monument.
11. Comparative stem photosynthesis in coastal mediterranean and desert legumes.
12. Recovery of a creosote shrub community.

### Desert Tortoise Studies

Desert tortoises received concentrated attention during 1993. All members of the Resources Management Division and a crew of more than a dozen volunteers assisted with inventory field work. Also in this period, detailed comments were prepared by park staff to the US Fish and Wildlife Service's Draft Recovery Plan for the Desert Tortoise.

In spring 1993, the Barrow Site, located in the Pinto Basin was closely monitored for a third consecutive year. Its size was also expanded from 1  $km^2$  to 1  $mile^2$  in order to answer certain research questions relating to optimum study plot size. The total number of tagged tortoises in the site was increased from 77 to 145. Nearly 80% of the tortoises found in previous years were relocated in 1993. A single tortoise marked in 1992 was found dead, representing the only known mortality of our marked animals.

In March, April and May, five additional sites were surveyed for tortoises using teams of staff and volunteers. These sites, each 500  $m^2$  were selected as areas of potentially high tortoise density. Four of them proved to have good tortoise numbers. Use of 500  $m^2$  plots was intended to give a better density estimate than transect counts, but using far less time and effort than required for 1  $km^2$  permanent study plots.

Results of the Barrow Site monitoring over three years was summarized and used as a basis for some computerized simulation studies. Results of these simulations were presented by Dr. Jerry Freilich at the annual meeting of the Desert Tortoise Council in Palm Springs, (May 1993).

A radio tagging study was started in summer 1993. Radio transmitters were attached to 9 desert tortoises at the Barrow Site. These animals were relocated twice weekly by Ann Garry. Goal of this study is to obtain detailed information on home range patterns of tortoises selected for their already having made known long-range movements. All were previously marked in Barrow Site monitoring operations. These animals will continue to be followed (and several additional transmitters added) for the next few years.

In response to an urgent need for information on demography of the Upper Respiratory Tract Disease (URTD) known to affect tortoises, two sick and nearly moribund animals were sent to Dr. Elliot Jacobsen's lab at the University of Florida. Dr. Jacobsen, the authority on tortoise disease, showed that one of the tortoises (from Panorama Heights) had an extremely high level of cadmium in its organs. Source of this metallic contaminant is a mystery. The other tortoise (from Indian Cove) had pneumonia and other signs of URTD but no cadmium. We will continue to watch for other sick tortoises, but these two are the only ones we have seen that were known to be ill.

In summer 1992, we marked and measured over 100 tortoise burrows at the Barrow Tortoise site in the Pinto Basin. Our goal is to follow the condition of individual burrows over time. The burrows were relocated and measured for a third and final time in winter 1993. Results from the study will be analyzed for publication.

### External Threats

Although the Eagle Mountain landfill proposal has been around for several years, 1993 saw several significant developments in this potential threat. The Record of Decision (ROD) for the EIS/EIR was approved in October by BLM. Mine Reclamation Corporation (MRC) began negotiating with the monument to develop a Memorandum of Understanding for a biological monitoring team to monitor impacts and develop mitigation recommendations. The team was proposed by monument staff during the permit approval process with the County of Riverside. Funding for the team would be provided by an environmental mitigation trust fund generated through a \$1/ton fee on the landfill. The team could receive up to 15% of the fund. Discussions on the MOU are continuing. Late in the year, three lawsuits were filed against the County of Riverside contesting the legality of the arrangements between the county and MRC. Appeals were filed against the ROD. The Interior Board of Land Appeals has put a stay on the land exchange authorized in the ROD. The appeals and lawsuits should be decided in 1994.

The Eagle Mountain Energy Company (EMEC) has proposed developing a hydroelectric project in the same location as the Eagle Mountain landfill. EMEC has a preliminary permit from FERC to study the feasibility of a hydroelectric project on the site. Study plans for the project were reviewed by the staff and comments submitted. Final study plans were released in July. The draft license application was submitted to agencies for comment in December. Resources staff will continue to monitor and comment on this potential threat.

## Air Quality/Minerals Management

Ozone monitoring continued as in previous years. Data capture rate was 70.54%. The low average was caused by equipment failure for a single month resulting in almost no data for July. In late summer, the ozone monitoring station was moved to Black Rock campground from its previous location at Lost Horse Ranger Station. The move required trenching and installation of phone and power lines. Data capture has been more reliable and the station easier to service since the move. Monthly average for data capture since the move was 91.9%.

One hundred mines were added to the park's database and new software used to improve ease of record-keeping. Three mine shafts of special concern were visited and safed using materials that continue to allow bats to access these sites. Several sites were signed and fenced to discourage entry until more permanent safing is performed.

Water levels in wells in the Oasis of Mara were monitored for another year with levels nearly static over the past few years.

Hiring was completed for a permanent GS-7 to assume Physical Science duties following about a year of the work being done by a temporary GS-5. The new Physical Science Technician will EOD February 1994.

## Geographic Information System (GIS)

The Resources Management division instituted a parkwide GIS in fall 1993. System configuration and acquisition was completed in summer and the system went on-line in September. Dr. William Smith from Central Washington University came for a week and assisted with staff training. The system includes an Apple Macintosh computer running GRASS under UNIX with a 3.4 gigabyte primary storage drive and associated peripherals.

To start park-wide mapping, the University of Arizona provided airborne video and high altitude 35 mm coverage of the entire park and surrounding buffer. The imagery was flown in October 1993 and delivered to the park in December on Super VHS videotape and in Kodak CD format on CD-ROM. This imagery will preserve a snapshot of the entire park at a resolution of 1.8 m per pixel.

Negotiations were conducted with the US Geological Survey to begin digitization of the Digital Line Graph (DLG) and Digital Elevation Model (DEM) coverages not presently available. These will be prepared over the next two years.

Park ecologist, Dr. Jerry Freilich, used video image analysis software to prepare a poster presentation on desert tortoise habitat assessment. The exhibit, taken to the Denver GIS meeting in November 1993, won the poster award for "Most Innovative."

## **Integrated Pest Management**

Few pest problems occurred during the year although ants in the visitor center and bees at popular viewpoints did receive attention. Dr. Jerry Freilich, IPM coordinator, attended IPM training in Savannah, Georgia in March 1993.

## **NEPA Compliance**

Twenty six projects were submitted for NEPA clearance during 1993 and all were tracked, logged, and investigated by Resources Management staff. Twenty four of the projects were approved with categorical exclusions from NEPA consideration. Two projects were disapproved by the division chiefs prior to NEPA considerations.

## **Vegetation**

The Vegetation Branch performed a wide variety of work through the year. In January, the staff experimented with direct seeding and imprinting, a restoration method which has proven effective on arid lands in Arizona. While results are still forthcoming, this method would prove more economical than planting nursery stock on larger disturbed areas. The plantings are exhibiting good survival even with the year's lack of precipitation. Planting was also tried with shorter pots (faster and less expensive to grow, easier to plant) on a small plot on the closed pistol range. A landscape planting in November was also performed in the Black Rock area. The planting was made much easier by a John Deere mounted auger, newly acquired through the Challenge Cost Share Program.

The branch also continued to cooperate with outside agencies and organizations. In March, we signed a Memorandum of Understanding with the Soil Conservation Service's Tucson Plant Material Center and the Mojave Desert Resource Conservation District. This will pave the way for cooperative projects for mutually beneficial planting and direct seeding experiments.

The cooperative project with the U.S. Bureau of Mines also progressed well. We finished a survey of abandoned mines throughout the monument and characterized the vegetation recovery on these sites. The composition of the recovering plant communities is significantly different than the surrounding undisturbed sites. Personnel from the San Bernardino National Forest Resources Management, also involved in mined land restoration, were instrumental in analyzing the survey data. The arid lands restoration bibliography was expanded and annotated and currently totals over 500 entries. Seed and propagated plants were collected for the trial mine site planting at the Silver Bell Mine. This planting, to be performed in February 1994, will look at plant survival and growth on a harsh mine site environment.

The nursery and its information clearinghouse, the Center for Arid Lands Restoration, continued to deliver presentations, nursery tours, and training. Some of the more important presentations included the Wildland Shrub and Arid Land Restoration Symposium in Las Vegas, and the NOS Reclamation and Revegetation Conference in Palm Springs. The NOS conference included a day field trip with over 100 participants touring Joshua Tree's nursery and revegetation sites.

The staff was also able to perform some fairly intensive tamarisk monitoring and eradication, the first since 1990. Known historic sites were checked for tamarisk and mechanical and chemical eradication were performed on all found subjects. Further follow-up monitoring will continue to be performed by a long term volunteer.

### Cultural Resources

Two full-time and one part-time temporary employees were hired under Cultural Cyclic and Backlog Cataloging funds. Their work resulted in the following National Catalog submissions for 1993:

- 53 Accessions totalling 786 objects
- 1089 Catalog records, item count 2689
- 261 Recataloged records, item count 1561

Four loans went out totalling 87 objects. One loan is a two year traveling exhibit funded by the National Endowment for the Arts. The other loans included exhibits at the Twentynine Palms Historical Society and the Twentynine Palms Art Gallery and analysis and research of the Pinto Basin archeological type materials by the University of California Riverside. Temporary exhibits were constructed for the monument's birthday, the anniversary of the National Park Service, and commemoration of the one hundredth birthday of Elizabeth Crozer Campbell. Construction on the new 3100 square foot collection storage/research facility started. Completion of the structure will be in February 1994.

Volunteers Harmon and Nelda King returned to Keys Ranch as caretakers and to assist park staff with stabilization efforts. Stabilization work at Keys Ranch continued. Forty feet of collapsed, hand constructed retaining wall along the wash bank was reconstructed. The bathroom and backroom sections of Keys' mainhouse was stabilized and asbestos removed. Asbestos was removed from the school teacher's house and stabilization started. Brush was removed from the garden area. The windmill was refurbished and is now pumping water to the remaining fruit trees in the garden. The park's third HABS/HAER project was a Historic American Buildings Survey (HABS) project completed on Keys Ranch. A team of four architects and one historian spent 10 weeks rendering and documenting the history of the site. Twenty-one architectural drawings and a historical report were completed.

Emergency safing of the Lost Horse mine and mill site was completed. The Western Region mine safing team from Death Valley National Monument replaced the safety net that had collapsed over the main mine shaft. Stabilization of the mill's walkway over portions of the collapsed area continues.

The staff participated in the Agua Caliente tribal festival. The park had a booth along with an exhibit and information hand outs. The staff also assisted the Malki Museum at the Morongo Reservation in organizing, exhibit and storage of artifacts. A loan of Cahuilla artifacts was coordinated with the Agua Caliente Cultural Museum staff from the park's collections to the tribal museum. Final report on Phase I of Joshua Tree's archeological survey was submitted to the monument. Catalog work sheets of the collected materials were completed and analysis of the artifacts continues.

## **MAINTENANCE**

### **Planned Activities**

Maintenance planning activities were initiated with the 10-238 process for REPAIR/REHAB projects. Estimates were developed for the CYCLIC projects in the Maintenance Management System (MMS). Plans and specifications were developed and submitted to the Regional Office for advertisement and contract award.

Special funding requests were submitted for Earthquake Damage in 1992 at Black Rock Canyon but were not received until FY93 for actual work. In-house planning activities were accomplished for each project and incorporated into the budget. Special funding for Keys Ranch required clearances for archeological and historical projects before any work started.

The Maintenance Division accomplished over \$509,706 in project work during 1993. Listed below is a breakdown of the projects.

### **Cyclic**

Replace picnic tables	13,000
Blade patch	100,000
Carpet HQ Visitor Center - Black Rock Canyon VC	23,000
Reroof Black Rock Canyon VC/Replace roof at BRIFC	26,410
Replace deteriorated Cottonwood Well casing	6,000
YCC program	6,750

### **Repair/Rehabilitation**

Repair earthquake damage Black Rock	53,400
Renovate HQ Visitor Center restrooms for accessibility	60,139
Construct Museum for Campbell collection	198,000
Construct Ranger Office at Cottonwood.	10,000
Remove Underground Storage Tank (UST) Lost Horse	13,000

### **Equipment Replacement**

The monument received no equipment replacement funding in FY93.

### **Buildings and Utilities Projects**

In addition to routine maintenance projects and the cyclic and repair projects listed above, the buildings and utilities branch completed the following:

1. Relocated the air quality monitoring station and utilities from Lost Horse to Black Rock

### **Canyon area.**

- 2. Stabilized the main ranch house and school house at Keys Ranch. Removed asbestos from the school teacher's house and contracted for removal of the hazardous materials.**
- 3. Installed a solar system to power the Lost Horse well system.**
- 4. Removed 740 lbs. of lead from the closed firing range. Assisted with clean up of the site.**
- 5. Installed air conditioning at Black Rock Canyon Visitor Center and the stable apartment.**
- 6. Installed new lights at the Oasis Visitor Center, Black Rock Canyon Visitor Center, and the Black Rock Canyon maintenance shop.**
- 7. Rehabilitated and redesigned a campground restroom at Black Rock for an environmental education center and handicapped accessible restrooms. Renovated the restrooms in the Black Rock Visitor Center for handicapped accessibility.**
- 8. Constructed a new ranger office at Cottonwood.**

### **Roads and Trails Projects**

**In addition to routine maintenance projects and the cyclic and repair projects listed above, the roads and trails branch completed the following:**

- 1. Removed entrance arches at Black Rock Canyon Campground. The resources nursery crew revegetated the site after removal of the arches. Maintenance provided personnel and equipment to assist with the landscape and revegetation project at Black Rock Canyon campground entrance and residence.**
- 2. Repaired erosion and installed flood control structures at Black Rock Canyon.**
- 3. Restriped 4 miles of centerline on park roads and renewed all park traffic control lines, stop bars, etc.**
- 4. Continued ongoing flood damage repair to road shoulders throughout park. Cleaned all drainage structures (culverts).**
- 5. Set up donated historic gold milling equipment at the Oasis Visitor Center.**
- 6. Assisted region in design of proposed fire suppression line.**

**Personnel Roster - Calendar Year 1993**

<b><u>NAME</u></b>	<b><u>POSITION</u></b>	<b><u>EOD</u></b>	<b><u>TRANSFER TERMINATION RESIGNATION DATE</u></b>
<b><u>Administration</u></b>			
David Moore	Superintendent	(1991)	12/2/93
Kathleen Billings	Supervisory Programs Specialist	(1992)	----
Dottie Clements	Secretary	(1984)	----
Kathy T-Marsh	Administrative Officer	3/21/93	----
Rebecca Patterson	Personnel Assistant	(1990)	----
Beverly Briggs	Purchasing Agent	(1985)	----
Eunice Sibert	Budget/Fiscal Clerk	(1990)	----
Gimma Hiland	Office Auto. Clk.(Temp)	03/15/93	----

**Interpretation**

William Truesdell	Chief of Interpretation	(1981)	----
Carol Peterson	Supvy. Park Ranger	(1990)	----
Arthur Webster	Supvy. Park Ranger	(1991)	10/30/93
Arthur Webster	Park Ranger	10/31/93	----
Elizabeth Van Zandt	Park Ranger	(1992)	----
Jimmy Pritchett	Park Ranger	(1989)	08/07/93
Art Kidwell	Supvy. Park Ranger	10/31/93	----
Ruby Newton	Park Ranger (Temp.)	(1991)	----
Laureen Lentz	Park Ranger (Temp.)	(1992)	----
Deanne Chatterton	Info. Recept. (Temp.)	(1992)	12/11/93
Bill Edwards	Park Ranger (Temp.)	02/07/93	----
Jody Lyle	Park Ranger (Temp.)	02/07/93	----
Ruth Thom	Park Ranger (Temp.)	02/07/93	----
Taylor Bucci	Park Ranger (Temp.)	02/07/93	04/29/93
Gloria Gillette	Park Ranger (Temp.)	05/16/93	----
Sandra Kaye	Park Ranger (Temp.)	05/16/93	----
James McGrath	Park Ranger (Seasonal)	10/31/93	----

**Visitor Protection**

D. Paul Henry	Chief Park Ranger	(1983)	09/04/93
Tandra Waldrop	Admin/Fiscal Clerk	(1992)	----
Kip Knapp	Supvy. Park Ranger	(1990)	04/17/93
Todd Swain	Park Ranger	(1990)	04/03/93
Todd Swain	Criminal Investigator	04/04/93	----

Albert De La Garza	Park Ranger	(1992)	----
Jeff Ohlfs	Park Ranger	(1990)	----
Deborah Brenchley	Supvy. Park Ranger	(1992)	----
Colin Smith	Park Ranger	(1992)	----
Bill DeBus	Supvy. Park Ranger	(1989)	10/01/93
Marion D-Nittoli	Park Ranger	04/18/93	----
Scott Stevens	Supvy. Park Ranger	04/18/93	----
John Brunkhardt	Park Ranger	05/30/93	----
Nina Burnell	Park Ranger	08/08/93	----
Thomas Gavin	Resource Mgmt. Specialist	08/22/93	----
Donald Roberts	Park Ranger	09/01/93	----
Mike Grayson	Park Ranger	11/21/93	----
Joni DeBus	Park Ranger (Temp.)	(1989)	10/01/93
Gary Garrett	Park Ranger (Temp.)	(1992)	08/21/93
Nina Burnell	Park Ranger (Temp.)	(1992)	06/13/93
David Trevino	Park Ranger (Seasonal)	(1992)	05/16/93
David Trevino	Park Ranger (Seasonal)	10/31/93	----
Jeff Rickerl	Park Ranger (Seasonal)	(1992)	05/23/93
Martin Johnson	Park Ranger (Seasonal)	(1992)	05/02/93
Martin Johnson	Park Ranger (Seasonal)	10/31/93	----
Richard Reyes	Park Ranger (Temp.)	(1992)	02/26/93
Joan Jackson	Park Ranger (Seasonal)	(1992)	05/30/93
Joan Jackson	Park Ranger (Seasonal)	09/03/93	----
Mike Grayson	Park Ranger (Temp.)	(1989)	11/14/93
John Brunkhardt	Park Ranger (Seasonal)	(1992)	05/29/93
Eric Beck	Park Ranger (Seasonal)	(1992)	08/10/93
Eric Beck	Park Ranger (Seasonal)	09/03/93	----
Cathy Bussey	Park Ranger (Seasonal)	(1992)	09/15/93
Alta Blietz	Park Ranger (Temp.)	(1990)	----
Linda Charlton	Park Ranger (Temp.)	(1989)	----
Gloria Gillette	Park Ranger (Seasonal)	(1992)	05/15/93
Robert Berg	Park Ranger (Seasonal)	05/03/93	11/14/93
Tim Bertrand	Park Ranger (Seasonal)	05/30/93	----
Steven T-Marsh	Park Ranger (Seasonal)	06/13/93	----
Mark Lemke	Park Ranger (Seasonal)	10/03/93	----
Karen Gutierrez	Park Ranger (Temp.)	10/24/93	----

### Fire Management

Thomas Patterson	Fire Management Officer	(1990)	----
Carol Henson	Fire Program Clerk	(1992)	01/23/93
Lori Tuttle	Fire Program Clerk	05/16/93	----
Terry Tilford	Fire Program Clk. (Temp.)	01/25/93	02/25/93
Brian Hansen	Ld. Forestry Tech.(Temp.)	05/16/93	----

Dan Madden	Forestry Tech. (Temp.)	05/16/93	06/19/93
Jack Franklin	Forestry Tech. (Temp.)	05/16/93	----
Evan Eisenberg	Forestry Tech. (Temp.)	05/16/93	----
Kathleen Wilson	Forestry Tech. (Temp.)	05/16/93	----
Dennis Griffiths	Forestry Tech. (Temp.)	08/08/93	----

### Maintenance

Curtis Mossestad	Chief of Maintenance	(1990)	----
Marie Lewis	Admin. Assistant	(1987)	----
Daral Bowe	Maint. Mech. Foreman	(1988)	----
Ray Morcilio	LD. Eng. Eq. Opr.	(1980)	----
Barbara Thompson	Motor Vehicle Operator	(1987)	----
Michael Addington	Maintenance Worker	(1991)	04/17/93
Michael Addington	Engineering Eq. Oper.	04/18/93	----
Cesar Garcia	Maintenance Worker	(1988)	----
Daryl Gardner	Maint. Mech. Foreman	05/02/93	----
Elena Wolsfeld	Maintenance Worker	(1990)	----
Ernest Bennett	Maintenance Worker	(1990)	----
Gilbert Moreno	LD. Maint. Worker	(1992)	----
James Newton	Maintenance Mechanic	(1992)	----
Robert Villanueva	Mobile Equip. Servicer	02/22/93	----
Dennis Dunham	Maintenance Mechanic	08/08/93	----
Keith Stevens	Maint. Wrkr. (Temp.)	(1991)	----
Chris Monroe	Mtr. Veh. Opr. (Temp.)	(1990)	----
Dick Capps	Maint. Wrkr. (Temp.)	(1992)	----
Michael Flock	Maint. Wrkr. (Seasonal)	(1992)	03/20/93
Michael Flock	Maint. Wrkr. (Temp.)	03/21/93	----
David Deere	Maint. Wrkr. (Seasonal)	(1992)	03/20/93
David Deere	Maint. Wrkr. (Temp.)	03/21/93	----
Chris Bussey	Laborer (Temp.)	04/26/93	06/12/93
Kirk Diamond	Maint. Wrkr. (Temp.)	07/25/93	----
Max Zielinski	Laborer (Temp.)	06/27/93	----
Herb Baylor	Maint. Wrkr. (Temp.)	07/25/93	09/12/93

### Resources Management

Robert Moon	Chief of Resources Mgmt.	(1980)	10/31/93
Mark Holden	Supvy. Park Ranger	(1992)	----
Jerome Freilich	Ecologist	(1991)	----
Rosalie Pepito	Museum Specialist	(1992)	----
Cecilia Garry	Bio. Sci. Tech. (Temp.)	(1991)	----
Carol Miller	Bio. Sci. Tech. (Temp.)	(1991)	----
Danielle Tilford	Biological Tech. (Temp.)	(1992)	10/15/93

<b>Stephanie Schmidt</b>	<b>Museum Aid (Temp.)</b>	<b>(1992)</b>	<b>----</b>
<b>Tracie Hampton</b>	<b>Museum Aid (Temp.)</b>	<b>(1992)</b>	<b>09/04/93</b>
<b>Melanie Spoo</b>	<b>Museum Tech. (Temp.)</b>	<b>(1992)</b>	<b>----</b>
<b>Chris Collins</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>(1992)</b>	<b>02/06/93</b>
<b>Chris Collins</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>02/07/93</b>	<b>05/29/93</b>
<b>Chris Collins</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>10/03/93</b>	<b>----</b>
<b>Delanford Truitt</b>	<b>Laborer (Temp.)</b>	<b>02/07/93</b>	<b>----</b>
<b>Joseph Grant</b>	<b>Phys. Sci. Tech. (Temp.)</b>	<b>02/07/93</b>	<b>----</b>
<b>Joseph Veech</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>07/18/93</b>	<b>07/19/93</b>
<b>Kirk Diamond</b>	<b>Laborer (Temp.)</b>	<b>06/07/93</b>	<b>07/24/93</b>
<b>Marie Denn</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>08/08/93</b>	<b>10/01/93</b>
<b>Harry Baczkowski</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>08/22/93</b>	<b>09/30/93</b>
<b>Deanne Chatterton</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>12/12/93</b>	<b>----</b>
<b>Douglas Sokell</b>	<b>Bio. Sci. Tech. (Temp.)</b>	<b>12/12/93</b>	<b>----</b>
<b>Katherine Tate</b>	<b>Museum Aid (Temp.)</b>	<b>12/26/93</b>	<b>----</b>