

Volume 11 Number 2 1996

# CONSERVATION

The GCI Newsletter



# The Getty Conservation Institute Newsletter

Volume 11 Number 2 1996

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## **Conservation, The GCI Newsletter**

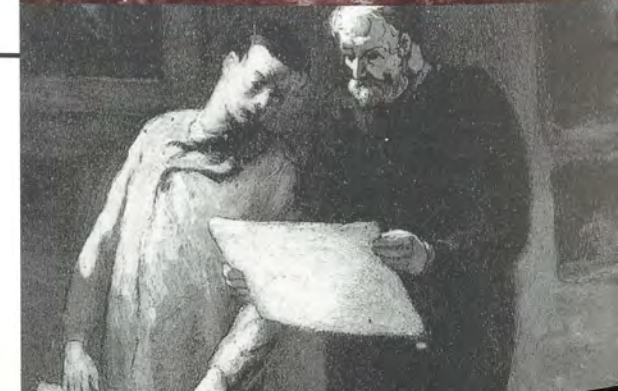
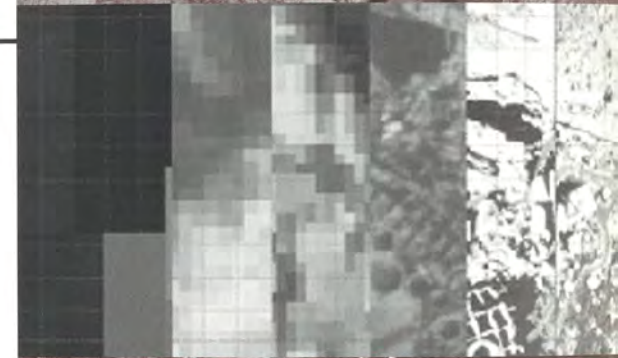
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The Getty Conservation Institute works internationally to further appreciation and preservation of the world's cultural heritage for the enrichment and use of present and future generations. The Institute is an operating program of the J. Paul Getty Trust. Other programs of the Trust are the J. Paul Getty Museum; the Getty Research Institute for the History of Art and the Humanities; the Getty Information Institute; the Getty Education Institute for the Arts; the Getty Leadership Institute for Museum Management; and the Getty Grant Program.

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**Front cover:** A detail of the rock painting in Cueva Pintada, one of the many rock shelters in the mountains of central Baja California, where some of the world's most spectacular rock art is found.  
**Photo:** Guillermo Aldana.

**Back cover:** Globe photo by Dennis Keeley.

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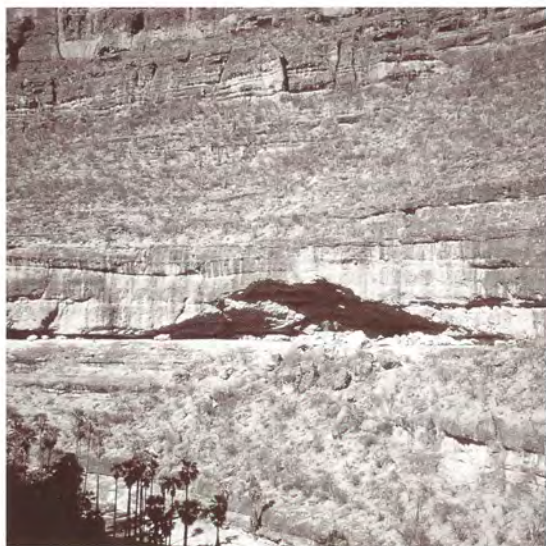
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CONSERVATION

By Nicholas Stanley Price

# THE CONSERVING



**Top: Cueva Pintada in Baja California's Sierra de San Francisco. This large rock shelter contains more rock art than any other site in the region. Photo: © Nicholas Stanley Price. Right page: Rock art in Cueva Pintada. Photo: Guillermo Aldana.**

*In all  
of civilized California,  
from south to north,  
and particularly  
in the caves and smooth cliffs,  
rustic paintings  
can be seen.*

— Attributed to  
Father Juan Bautista Mugazábal  
(d. 1761)

**D**EEP IN THE MOUNTAINS and precipitous canyons of the Sierra de San Francisco of the Baja California peninsula in northwest Mexico lies some of the world's most spectacular rock art.

Designated as a World Heritage Site by UNESCO and today the destination of an increasing number of visitors, the rock art sites of Baja California remained for many years little known, even after news of them had traveled beyond the Sierra. Jesuit missionaries who entered Baja California in the 18th century were the first to report on their existence. The Jesuits also provided firsthand information on the local Cochimí Indian population, but the Cochimí did not lay claim to the paintings, ascribing them instead to a race of giants that had entered the peninsula from the north.

The Jesuits recorded their observations on the paintings in a dispassionate style, proposing rational explanations for their creation. A more excited response to discovering the painted rock shelters in this remote and rugged land is that of a recent author, Harry Crosby, who did much to publicize the Great Mural sites, as he called them, through his explorations of the Sierra in the 1970s:

Over the slit-like opening of a long shallow cave was a vast expanse of fairly smooth rock surface. On that was painted a tumultuous cavalcade of human and animal figures far greater than life size. All the beasts seemed to press forward in movement from right to left; huge red and black deer and equally immense red mountain sheep dominated the surge. The figures were all executed in a strange sort of partial superimposition that gave a powerful sense of motion.

Each animal seemed to be in mad flight treading on the heels of those ahead and straining to free himself from the crush behind. Scattered among the creatures of this bustling frieze were a variety of strangely static humans. Whereas the hurrying animals moved in profile across the stony canvas, the men faced us, frozen into identical erect postures with their arms upraised.

I was astonished and overwhelmed. The impact of that vast canvas is impossible to describe.

Few outsiders had preceded Mr. Crosby in documenting the Sierra de San Francisco's rock art. For nearly 200 years after the expulsion of the Jesuits from Baja California in 1768, there was little investigation of the paintings. One of the few reports was that of Léon Diguët, an engineer employed by the French mining company at Santa Rosalía, on the east coast of the peninsula; he explored a number of sites and in 1895 published descriptions of their paintings in the French academic literature. In 1951 a team from Mexico's National Institute of Anthropology and History (INAH) explored a site in the Sierra de Guadalupe, south of the Sierra de San Francisco. Neither report, however, led to systematic exploration.

It was not until the 1960s that the rock paintings were widely popularized, the result of their "discovery" from a helicopter by the well-known mystery writer Erle Stanley Gardner. Local ranchers of the Sierra had, of course, long been aware of the sites, many of them encountered during searches for lost livestock along the steep canyon walls.

# the Rock Art of Baja California

Today the ranchers play a key role, acting as guides to visitors, but they claim no cultural affinity with the painting tradition, being for the most part descendants of the Hispanic population that accompanied the first Jesuit expeditions into the Sierra.

## The Paintings in Context

As Harry Crosby's description suggests, the paintings are notable for often being much greater than life size and for their vivid depictions of animals in movement and humans in formalized, static positions. Hundreds of sites with paintings have been recorded in the sierras of the central Baja

peninsula, an arid region receiving less than 100 millimeters of rainfall a year. Despite the apparently inhospitable nature of the area, the paintings depict a wide variety of animal species: among them are mule deer, desert bighorn sheep, pronghorn antelope, mountain lion, and rabbit; there are also birds and marine animals—fish, sea turtle, and stingray.

Red, black, white, and (rarely) yellow are the principal colors used, derived from local mineral sources. Figures are often outlined in white and infilled with either solid color or stripes. Many human and animal figures are impaled by arrows or spears.

The paintings—and the many petroglyphs, or rock engravings, found in the Sierra—are the work of the prehis-

toric population that inhabited the Baja California peninsula. The archaeology of this area is now much better known thanks to a project carried out and directed by María de la Luz Gutiérrez of INAH and Justin Hyland of the University of California, Berkeley, between 1992 and 1994. Systematic surveying and selected excavation of rock-shelter and open-air sites have helped establish the cultural context of the remarkable paintings and their creators. Radiocarbon dating suggests that most sites flourished between 1500 and 500 years ago, though there is evidence of human presence in the area as early as 9000 B.C.E.

In addition to the large scale of many of the paintings, two aspects that impress those lucky enough to see them are the astonishing preservation of their strong colors and the fact that many motifs are painted far out of reach of present-day visitors. The Jesuits speculated that the paintings—in places nine meters or more above ground level—might have been executed using scaffolding, “unless we imagine extremely long paint brushes in their hands!”

The preservation of the colors was noted by Father Joseph Mariano Rothea, who lived at the local mission of San Ignacio until the Jesuit expulsion: “The durability of these colors seemed notable to me; being there on the exposed rock in the inclemencies of sun and water where they are no doubt struck by rain, strong wind or water that filters through these same rocks from the hill above, with all this, after much time, they remain highly visible.”



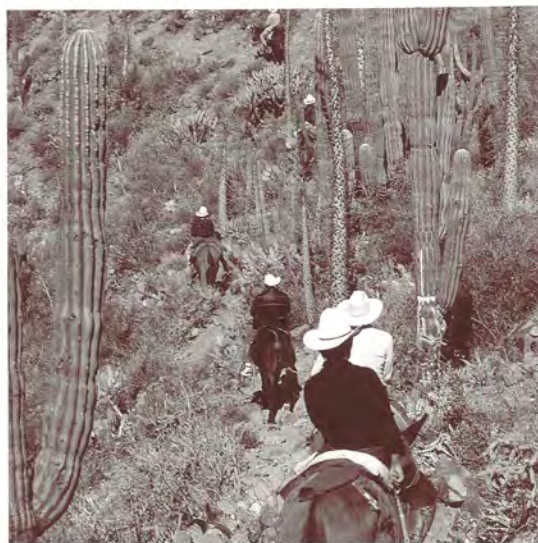


Such testimony can serve as a baseline condition report from more than two centuries ago. Present-day observations of the rock shelters in which the paintings are found unfortunately indicate cause for concern. The shelters are formed where water and wind erosion create shallow overhangs. At times, large blocks of the volcanic conglomerate collapse when the eroding strata beneath can no longer support them. In other words, the very process that created the shelters carries with it the seeds of the shelters' destruction. One of the tasks of the modern conservator is to determine the rate of deterioration of the shelters and to take measures to slow it down.

## Conservation of the Great Murals

In 1994 the Getty Conservation Institute launched the first field campaign of a project designed to assess the conservation needs of the rock art sites of the Sierra de San Francisco.

The project was established as a collaboration with INAH; the Governor of the State of Baja California Sur; and Amisud, a nonprofit association devoted to the conservation of Baja California's natural and cultural heritage. The President of Amisud, Enrique Hambleton, has been exploring and photographing the mural sites for some 25 years, having accompanied Harry Crosby on several of his trips during the 1970s.



The Institute's involvement in the area began in 1989. At the initiative of GCI Director Miguel Angel Corzo—then President of the Friends of the Arts of Mexico Foundation—the Institute, the Foundation, and Mexican partners organized a visit to sites in the Sierra de San Francisco, followed by a symposium to analyze conservation and management needs. Alejandro Martínez, INAH's Coordinator of Archaeology, participated in the trip and the discussions that followed. "I was impressed with the sites and the work Enrique Hambleton and others were doing," he says. As a result, he directed INAH's attention toward promoting the rock art of the region, an effort that culminated in the archaeology and management project that it undertook in the early 1990s, and in the nomination of the rock paintings as a World Heritage site.

Continuing discussions between the GCI and Mexican authorities in the years following the 1989 site visit ultimately led to the conservation project initiated in 1994, which chose the Cueva de El Ratón as a pilot site. The project has four main aims: to document the extent and condition of the paintings at that location, to determine how best to preserve them, to help establish a management plan for the Sierra's archaeological zone, and to extend the expertise of selected Latin American professionals to include rock art conservation. The project draws upon the GCI's previous experience in organizing training courses in rock art conservation and in the management of sites. The core team members include



two graduates and the coordinator of the diploma course in rock art conservation that the GCI coorganized with the University of Canberra in 1989. Of the five participating Latin American professionals, two are conservators from INAH's Restoration Center in Mexico City; the other three come, respectively, from Bolivia, Chile, and Argentina.

This team has now recorded the paintings at El Ratón in detail and assessed their condition. As a result of the third field campaign, which took place in May 1996, the composition and techniques of the paintings are being analyzed. The team used stereophotogrammetry—the photographing and delineation of a surface so that it can be viewed in three dimensions—in order to provide a baseline record of the rock art; no other technique seemed capable of accurately recording paintings executed on such a heterogeneous substrate of rough conglomerate.

The condition assessment was achieved by the more traditional technique of extremely close observation over several weeks. Nearly 200 separate motifs have been identified and their condition described on a detailed record form and graphically on an acetate overlay on an enlarged photograph of the area under study. A database containing all this information enables the team to ask questions about the covariation of different variables of technique or condition.

Participating in this process of comprehensive assessment "has changed how I will work in the future," says Valerie Magar, one of the two INAH conservators on the proj-



ect's team. "I now realize the importance of detailed recording of the condition of sites."

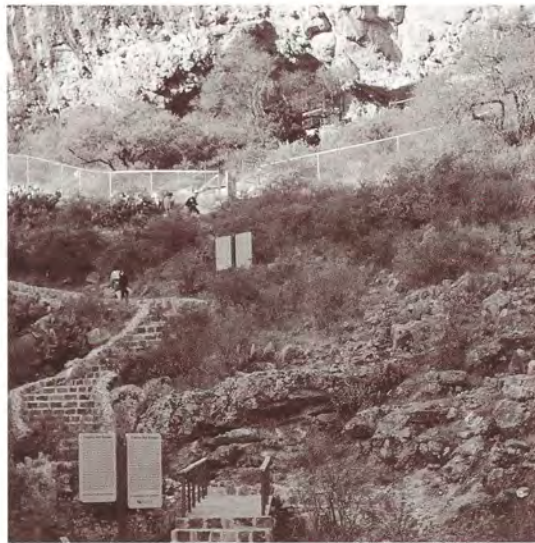
Sustained observation also enables team members to identify clues about the original painting technique, the actual sequence of painting in places where there are multiple superimpositions, and the differential survival of various pigments. Field observations have also guided the scientific sampling of pigments and deterioration phenomena that was carried out this year.

The combination of field observation and scientific analysis should answer questions such as those the Jesuits posed. Were scaffolds or long brushes used? Are the colors as durable as the Jesuits thought? And to what extent can the panels of extensive painting be considered "compositions"? Perhaps, as with much rock art, the act of painting was more important than the aesthetic impact of the finished result.

When the results are synthesized, not only will the Cueva de El Ratón become the first Great Mural site to have its art fully recorded and analyzed, but the project's methodology will be made available for other painted sites in Baja California and elsewhere.

## Management of Visitors

In the past, the rock art sites of Baja California were protected by their remoteness. Even today, only a couple of sites are reachable by vehicle along dirt roads. Otherwise,



to gain access, visitors must journey many hours on a mule, accompanied by guides from the Sierra's scattered ranches who ensure safe descent through the deep canyons to the cooler streambeds and an overnight campsite.

Until recently, most of the relatively few visitors to the sites have been from the United States. After Erle Stanley Gardner publicized the existence of the paintings in the 1960s, individual researchers and groups were inspired to explore the Sierra, frequently with adverse impact on the sites; every movable object was removed from them, and illicit excavations were made in rock shelter floors. Moreover, the natural environment of the canyons deteriorated as increasing numbers of people camped there.

By the early 1990s, official concern had increased for the preservation of the Sierra's natural and cultural heritage. INAH had already taken a number of measures to control visitors to the area. However, with the frequent flouting of existing regulations and the expected increase in tourism as a result of the World Heritage nomination, a new management plan was urgently needed.

At this point, the site conservation aims of INAH's special archaeological project in the Sierra coincided with the GCI's interest in the development of a management plan. The four partners—INAH, the GCI, the Governor of Baja California Sur, and Amisud—worked together closely to implement a new plan. They used a participatory model in which all those affected by the plan, including the local

*Left page, left photo: Descending into the canyons of the Sierra. Most of the rock art sites in the mountains of central Baja California are accessible only by mule or on foot. Photo: Guillermo Aldana. Right photo: A view of the canyon from Cueva Pintada. Photo: Guillermo Aldana.*

*This page, left and near left: Access to Cueva de El Ratón before and after the 1994 installation of a pathway and signage. Photos: Nicholas Stanley Price. Below: Members of the project team at work in Cueva de El Ratón. Photo: Gaetano Palumbo.*



ranchers, were consulted and their interests taken into account. Following two meetings of all the stakeholders in San Ignacio, in November 1994 and April 1995, the new plan was agreed upon and is now in operation.

It is "absolutely essential" for local residents to participate in the creation of the plan, says Enrique Hambleton of Amisud. Without them, he believes, it would fail. "One of the interesting things about this management plan is that it was sort of a historical first in Mexico. Management plans have tended to be pronouncements from the central government, with little or no input from local inhabitants. In this case, the model we used called for participation from everyone with a stake in the area. Some 40 or 50 people sat around

**Cueva de El Ratón before and after the 1994 construction of wooden walkways for visitors. Photos: Kathleen McDonnell and Antoinette Padgett.**

a table for four days, hammered out their differences, and came up with a really good document. So everyone feels the plan is theirs. That helps in making it work.”

Freddy Taboada, one of the project’s conservators who has also worked extensively in the management of Bolivian rock art sites, concurs. He noted how much could be accomplished “when there is respect for the cultural legacy, respect for the biosphere, and when authorities, scientists, and the local community work together solving the problems that arise.”

For visitors to INAH’s archaeological zone in the Sierra, the most visible results of the new site management measures are the access paths, walkways, and information signs that greet them at these remote places. In order to see the sites, visitors must contact the information center in San Ignacio, acquire authorization, and have their requirements for guides and pack animals ordered in advance by radio transmission to the ranches in the Sierra from which trips depart. Requests for visits are divided into categories ranging from day trips to sites accessible by dirt roads to research visits to parts of the Sierra that otherwise remain closed.

These procedures have helped manage the increasing number of people wanting to see these spectacular sites and the no less spectacular landscape that surrounds them. Along with the facilities now installed at six of the most visited rock shelters, they help convey the image of a well-managed area, thereby favorably influencing visitor behavior.

Installing facilities at the six rock shelter sites was a major logistical challenge. The design of the walkways was inspired by similar ones in place at rock art sites in Kakadu National Park in Australia. However, unlike at Kakadu, helicopters were not available to fly in the large quantities of construction material and field provisions needed for a four-month campaign involving some 30 personnel.

In a remarkable organizational achievement, the INAH team—supervised by María de la Luz Gutiérrez, the INAH archaeologist responsible for the Sierra de San Francisco—transported in approximately 60 days all the materials and



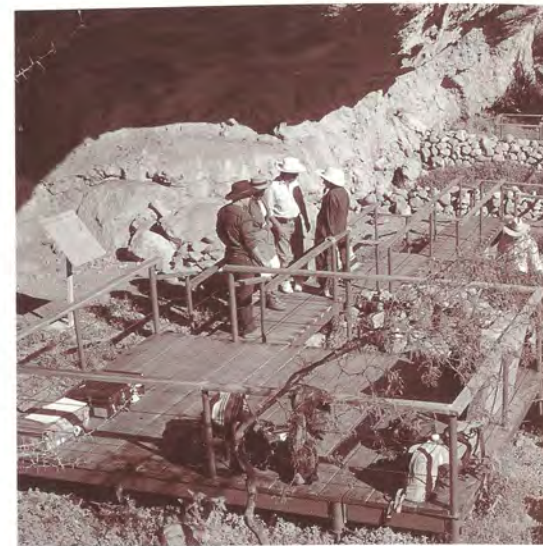
provisions needed using some 40 pack animals. While 20 donkeys were descending loaded into the canyon, 20 other animals without loads were ascending to the top of the mesa, ready to return the following day. The work was carried out against a tight deadline between July and October 1994, during the hottest time of the year.

Alejandro Martínez of INAH is pleased that his efforts and those of others have led to the new attention the rock art sites have received, both nationally and internationally. But he would like to see more done to assist the local residents of the Sierra who are already doing a better job of protecting the sites. “I am convinced that an important element in managing the sites is raising the socioeconomic level of the local population,” says Dr. Martínez. “Encouraging controlled, low-impact tourism would provide them with greater income and give them an additional stake in the preservation of the rock art.”

## The Future

The isolation of the Great Mural sites in the Sierra de San Francisco has certainly helped preserve them. But it also creates considerable obstacles to recording the paintings, to assuring their future conservation, to providing visitor facilities, and to monitoring the effectiveness of site management measures.

The application of scientific analyses may modify the



Jesuits’ impression—shared by many—of the good state of the paintings’ preservation. For instance, because some pigments weather faster than others, what we see now may not be as it was originally painted. Certainly an increased understanding of the paintings’ techniques and deterioration processes will help in the control of future degradation. The Mexican conservators involved in the project at El Ratón will have an important role to play in future monitoring, as they draw upon their intimate knowledge of the site and the detailed documentation now in hand. Condition analyses so far suggest that close monitoring of the paintings will be essential if their deterioration is not to continue unchecked.

The field of rock art conservation has much less accumulated experience to rely upon than have many other areas of conservation. And the necessity of working in remote areas, such as the Sierra de San Francisco, compounds the problems facing rock art conservators. Nevertheless, because of the sustained, close collaboration between the GCI and its Mexican partners, there are good grounds for believing that this outstanding rock art heritage will remain well managed and an inspiration to visitors for a long time to come.

*Nicholas Stanley Price, former Deputy Director of the GCI Training Program, is a consultant leading the GCI team at the Cueva de El Ratón.*



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# For the Record

## A Conversation with Peter Dorman

Documentation traditionally has had a quiet but central role in the work of archaeologists, architects, art historians, and conservators. A pioneer in modern documentation is the Epigraphic Survey of the University of Chicago's Oriental Institute, which for over 70 years has been recording reliefs and inscriptions on ancient Egyptian monuments, many of which are eroding away. Because of its importance, the Epigraphic Survey in 1989 received funding from the Getty Grant Program—a sister program of the GCI—for the conservation and cataloguing of the photographic archive at Chicago House, the Survey's field headquarters in Luxor, Egypt. More recently, the Grant Program gave an additional donation for assistance with the publication of a new series of volumes entitled *The Reliefs and Inscriptions of Luxor Temple*, containing the results of the Survey's work at Luxor.

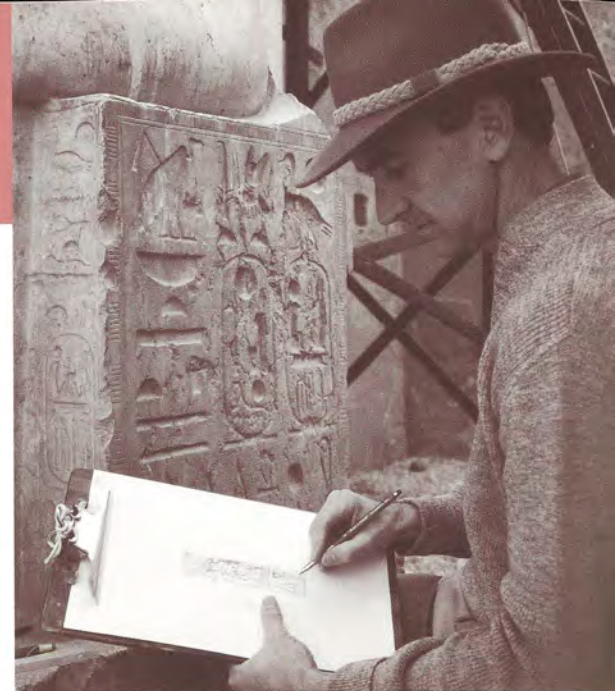
Since 1989 Peter Dorman has served as the Field Director of the Epigraphic Survey, spending part of each year working out of Chicago House in Luxor, supervising the Survey's staff of photographers, artists, and Egyptologists. He is also Associate Professor of Egyptology in the University's Department of Near Eastern Languages and Civilizations. Prior to his present post, he worked for 11 years as a curator in the Department of Egyptian Art at the Metropolitan Museum of Art in New York.

Some months ago Dr. Dorman spoke with Margaret Mac Lean, Director of the GCI's Documentation Program, about the mission and work of the Epigraphic Survey.

■ *Margaret Mac Lean: The Oriental Institute has held an important place in the history of archaeology and scholarship. How did it come about?*

■ Peter Dorman: The Oriental Institute was the fulfillment of a lifelong dream of James Henry Breasted, the first Egyptologist to be hired by any American University. In the 1890s, he came to the University of Chicago as a professor in the Department of Semitic Languages and Literatures. Despite his focus on Egypt, Dr. Breasted was very interested in the entire ancient Middle East. He wanted to establish a research institute within the university that would examine the ancient cultures and languages of the Middle East, which he considered the cradle of civilization.

The Oriental Institute was founded under the patronage of John D. Rockefeller Jr. in 1919. Excavations were undertaken at a number of places that figured importantly in ancient and biblical history, such as Megiddo and several sites along the Euphrates River. Institute projects brought scholars of diverse expertise together at a single location so that they would have daily contact, forming a community able to reconstruct the early development of civilization. Part of this work, of course, involved the careful recording of ancient documents.



*What about the Epigraphic Survey? What were its origins?*

In 1894, after he had received his degree in Berlin, Dr. Breasted traveled up the Nile with his fiancée, and as she sketched in the shadows he worked in the sun, making hand copies of historical inscriptions. His interest developed into a project to translate all the major historical inscriptions from the ancient monuments in the area. The initial sources for his studies were publications of the Napoleonic expeditions of the 18th century and works by 19th-century travelers to Egypt.

During his forays into the field, Dr. Breasted was alarmed to discover that some of the inscriptions he was hoping to recopy and perhaps to correct were missing. In the course of only 50 or 60 years, many of these monuments were damaged or destroyed, no longer existing as sources for Egyptian history and religion. In 1905 and 1906 Dr. Breasted traveled to Nubia [in present-day northern Sudan and southern Egypt] to make sure that the lesser-known monuments far up the Nile Valley were recorded in some form. The methods developed in that survey eventually led to the techniques we still use at Chicago House.

The idea for the Epigraphic Survey itself was hatched in the fall of 1922, when Dr. Breasted was laid up at the Winter Palace Hotel in Luxor with malaria—just as Howard Carter was discovering the tomb of Tutankhamun. At the very time when Egyptian archaeology was celebrating one of its great triumphs, Dr. Breasted was formulating an idea to found a permanent expedition that was essentially anti-archaeological—one that would have nothing to do with laying bare stratified sites or recovering objects. While most expeditions went to explore and excavate, this one would exist solely for the purpose of epigraphy—that is, recording and studying inscriptions already visible. Essentially, this is what the Survey has been doing for the last 72 years, since its founding in 1924.

*Could you describe the methods that Dr. Breasted developed and that are still used in the Epigraphic Survey?*

We combine the talents of photographers, artists, and epigraphers skilled in all aspects of the Egyptian language. Once we select a monument for study, the photographer captures a complete set of rectified images of every aspect of the monument. We use 8 x 10 field cameras for much of this, but we also do smaller-format photography for difficult areas.

The artist pins an enlarged print to a drawing board, goes to the wall itself, and in front of the monument pencils in all the visible traces of relief directly onto the photograph. When the penciling is finished, the artist returns to the studio and inks in the pencil traces directly on the emulsion of the photographic print. The inked photograph then goes back to the photo studio, where the photographic image is bleached away, leaving intact only the inked lines.

From that drawing we make a series of blueprints. One of these blueprints is cut up into maybe 12 or 15 bits that isolate small portions of the drawing. The epigrapher, who is also an Egyptologist, then takes these to the wall and, line by line, compares the artist's rendering to what can be seen at the wall.

The views of both the artist and the scholar are necessary. The artist is primarily a technician who often has little formal knowledge of Egyptian hieroglyphs or iconography and none of the expectations or assumptions of the Egyptologist. The role of the Egyptologist is to verify that everything the artist put on the drawing is actually there. Particularly in damaged areas, the Egyptologist questions everything, looking for bits that the artist may have omitted or misinterpreted as damage. All the corrections and alterations to the drawing are noted in pencil in the margins of the collation sheet.

Next the annotated sheets are given to a second epigrapher, also an Egyptologist who goes to the wall to verify or disagree with the comments of the first epigrapher, and to add further corrections—rarely does the first epigrapher see everything. The first epigrapher then must agree to all the comments added by the second. When all of these comments are agreed to, the artist comes back to review the corrections and also must agree with each one made. If there is a serious disagreement, the issue often goes to the field director for resolution.

Technologically speaking, this method developed by Dr. Breasted is outmoded, but in terms of the judgments that we bring to this kind of documentation, it's absolutely up to date.

*This is a labor-intensive process, but it clearly yields valuable information. Could you talk about the choices that you have made regarding technology and the decision to carry on with this method?*

Many people who come to Chicago House are surprised to learn that we do not use computers to hasten the very laborious manual process of our work. In the future we will certainly be using scanners, both for photography and final drawings. This will assist us not only in the publication phase but in the enlargements the photographer makes. Once an image is scanned and we can manipulate the size of the drawings, we will not need to worry so much about

the scale of the original drawing, as we can easily enlarge or reduce the digital image.

As for the methodology, there are problems. The artist's drawing is a subjective transposition from a three-dimensional stone surface to a two-dimensional paper surface. It contains an enormous amount of distillation and subjective judgment. Decisions are made every time pen goes to paper to edit out certain things and accept others. It is difficult to see how computers would facilitate this complex interpretive process, which relies extensively on human perception.

*This brings us to the issue of the "objectivity" of photographs. One very often finds an excess of faith in the camera's ability to capture reality free from interpretation. This seems to have been recognized when your method was being worked out, or you wouldn't have built in these layers of iteration and consensus.*

That's right. We recognize the ability of the camera to capture a very precise basis for the artist's drawing, and it provides wonderful information. But for the definitive version, we opted for this more elaborate process. Producing our final facsimile documentation is, in effect, editing a wall and a photograph together, getting across to the reader the essentials, and little else. A photograph may seem to pick up everything, but it will tend to conceal parts of everything, too, just because it contains shadows.

*At the same time that you are preserving the information in the carved inscriptions, you are also creating an extraordinary record of their physical condition.*

One thing we hope for is that we are recording the monuments, the reliefs, and the inscriptions in such a way that questions asked in the next century can be answered with all these drawings. We are also very much aware of the possibility of using photography as a monitoring device. The archives now hold about 18,000 images, and they can and should be used for that purpose.



# Capturing the Past

## Documentation & Conservation

By Margaret G. H. Mac Lean

**A combination of remotely sensed images of Pueblo Bonito, an archaeological site in Chaco Canyon, New Mexico. Prepared by Dominic Powlesland, a GCI consultant, the combined images illustrate the benefits and limitations of various forms of remote sensing for site monitoring—from low-resolution satellite imaging (Landsat, Spot, KFA) to digital multispectral imaging and color infrared photography (CAMS, CIR), to conventional mapping-type photography (AP 1963, AP 1972), also taken from aircraft. Multispectral images provide useful information on the overall ecological characteristics of an area, while conventional photography is better at recording the condition of a particular site.**

Landsat Spot KFA CAMS CIR AP 1963 AP 1972



**I**N THE LEXICON OF THE CONSERVATION PROFESSION, the word *documentation* occupies a fundamental place. Yet this important component of the conservation process, increasingly recognized as critical, is less frequently used than discussed—and even more rarely defined.

What exactly *is* documentation? And what does it have to do with conservation?

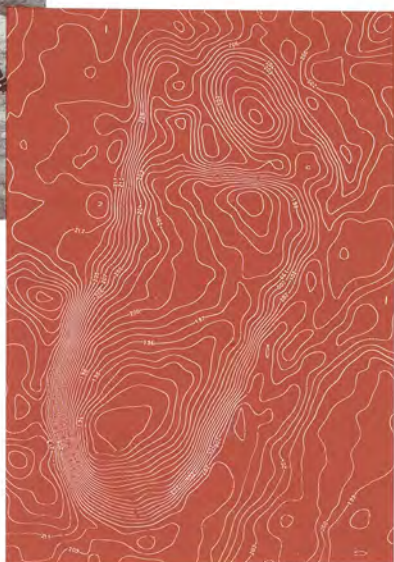
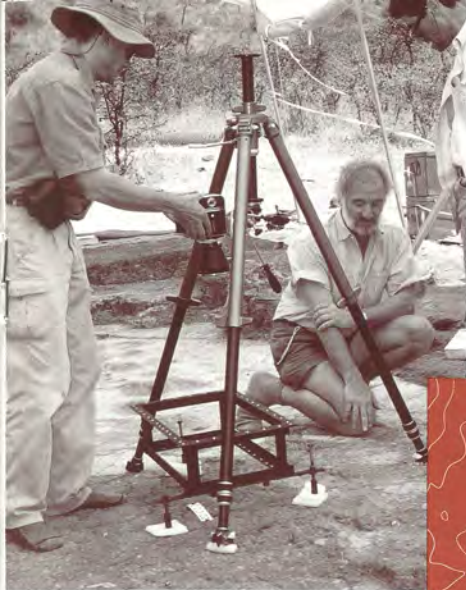
Documentation is information. In conservation, this information can take many forms. The documentation of a painting, for example, might be the meticulous description of its present condition, accounts of past conservation, restoration, analysis, and diagnosis, or a thorough graphic, photographic, and narrative record of all work undertaken on the painting. For an archaeological site like an Inca ruin, documentation might include a cartographic survey of the local geography, a photographic and graphic record of the structures and their details (see “Profile,” page 10), a description of the materials on the site, a condition report on the exposed features, or a description of physical threats to the site.

The documentation of a cultural resource—be it an object or a place—can be likened to a medical exam. It provides information that serves as the basis for comparison with subsequent monitoring or as the starting place for an intervention of some kind. A physician would never recommend surgery without assessing a patient’s history, symptoms, and condition. Unfortunately, in conservation (and in archaeology), skipping the steps of examination and diagnosis has led

to some sad and unnecessary losses.

Preserving and protecting a cultural resource is impossible without reliable information on its condition and without the ability to monitor change. These require good documentation. At the GCI we are working toward increased understanding of the benefits of accessible, effective, efficient, replicable, and accurate documentation. At the same time, the Institute, through its own projects, is producing extensive information about the physical condition of cultural resources and the process of conservation. In doing that, the Research and Applications group of the GCI’s Documentation Program is using everything from traditional research and recording techniques to the latest in technology.

Increasingly, the Research and Applications staff are involved in planning and managing the recording of all stages of Institute field projects. For example, in the project to conserve the early hominid trackway at Laetoli, Tanzania, it was apparent that reliable documentation would be absolutely necessary if the protective action proposed to the Tanzanian government were to occur. The recommendation to cover the trackway in order to protect it would be acceptable only if the project team created a thorough, accurate, and usable record not only of the processes involved in its protection but also of the trackway itself. Because covering the site would obviously make it difficult to analyze the information it contained, the project team consulted with



**Top:** Tom Moon, Heinz Rüther, and Gaetano Palumbo—members of the Laetoli project team—preparing to photograph one of the 3.5-million-year-old hominid footprints at the site. **Photo:** Neville Agnew. **Right:** A photogrammetric plot of one of the Laetoli footprints.

anthropologists and others who might want to study human locomotion, as well as other issues, in relation to the trackway. A full sense of what was important about the site was necessary to the process of determining the best level of information that needed to be gathered and how best to proceed. Ultimately, the team decided on close-range photogrammetry, complemented by contextual videotaping, and general photography of the processes. The photogrammetry, done by a skilled team from the University of Cape Town headed by Heinz Rüther, is yielding the most accurate three-dimensional images ever generated of the trackway.

Other kinds of field projects require different approaches. The stabilization of the earthen bas-reliefs of the Royal Palaces of Abomey is a project that involves a classic approach to recording, built around straightforward photography done before, during, and after the practical intervention. As part of the project, the conservation team is training local curators and museum staff in using photography as a conservation tool in monitoring deterioration at their fragile World Heritage Site. In this undertaking, as in most Institute field projects, the criteria for designing the information strategy are linked to the needs and interests of our project partner. That means asking questions about how the information will be employed and housed and whether local professionals are able to use the same documentation approach.

Some of our research is designed to anticipate needs in the field by testing tools being touted as the latest great innovation and by assisting conservation practitioners to make sound decisions about the technologies they choose. One recent research project resulted in a new combination of hardware and software for on-site recording. The system was taken to the outdoor site of the David Alfaro Siqueiros mural *América Tropical*, in downtown Los Angeles, and used to make an extraordinarily detailed digital record of the work. The resulting electronic files can be used for graphic condition reports, virtual restoration, condition monitoring,

high-quality photographic printing, and many other purposes.

In a related research project, time-lapse video microscopy was employed to record the crystallization of salts and subsequent deliquescence (that is, the return to a liquid state). The results were a graphic and powerful reminder of the disastrous action of salts in fragile materials. This documentation is not only useful in analysis but it can also demonstrate the need for preventive measures, supporting requests for assistance by conservators and stewards of the heritage.

Another example of a research and application project is in the area of remote sensing—any of a number of methods of noninvasive recording for analytical purposes, from ground-penetrating radar to high-altitude photography. Several years ago, spacecraft-generated remote sensing began to be heralded as an efficient way to automate and simplify monitoring of the condition of cultural sites around the world. Because many people working in site protection sought some guidance on how to accomplish such resource-intensive work effectively, investigating the real potential of remote sensing was clearly an important effort. Now, midway through the project, we have found that in this still-evolving field there are many strengths—and some significant weaknesses. The technological landscape is changing fast, and costs are declining precipitously. New options in documentation can come into range quickly. Our task in this area is to demystify this intensely technical area of analytical recording to assist the professional community in making wise choices regarding their use of resources.

The objective of all these activities is to promote documentation as an integral first step in the planning, analysis, intervention, and monitoring phases of conservation and archaeological work. As such, it plays a central role in the effective management of the cultural heritage. We cannot manage or protect what we do not fully understand.

*Margaret Mac Lean is the Director of the GCI's Documentation Program.*

# A Strategic Plan for the Getty Conservation Institute

By Miguel Angel Corzo

## THE GCI IN TRANSITION

Over the last 10 years, the Getty Conservation Institute has achieved a significant place among organizations around the world that deal with the conservation and preservation of cultural heritage. Although a relative newcomer to conservation, the GCI has accomplished much in a short period of time, thanks to the extraordinary efforts of its staff and its focus on many important issues.

With the move to the Getty Center and the coming of a new century, the time seemed ripe for reevaluating the Institute's role in a world where respect for diverse cultural values is receiving greater attention, and the increasing threats to cultural heritage—mass tourism, unchecked development, war and vandalism, and diminishing resources for culture—are more clearly recognized.

Given this environment, a new vision for the Institute was necessary, one that could guide it over the next five years into the new millennium while maintaining the values dear to the organization as it has evolved over the years.

Late in 1995 the GCI's executive staff embarked on a comprehensive analysis of the challenges ahead. We needed a plan to maintain focus, to redefine conservation in its broader context, and to allow for broad participation of Institute staff. We wanted to integrate our own areas of expertise more fully and become stronger than the sum of our parts, building on one another's strengths, breaking down boundaries, and reorganizing ourselves in accordance with new ways of thinking.

Furthermore, as an information organization, a resource organization, and a research organization, we wanted to encourage others to work with us so that together we may increase awareness of the benefits of conservation for society at large.

We were aware that we needed to focus on what was important—as opposed to what was novel—to work through the conflict but not be afraid of it, to communicate more effectively with the world beyond the Institute, and to for-

mulate new ways to talk about conservation.

We needed to be open and honest about our hopes and ideas and build trust and friendship with others.

To achieve these ends, the Institute's executive staff spent many hours in discussion over the course of several months, patiently guided in our sessions by Jean-Marie Bonthous, a consultant who has worked with large organizations around the world. The executive staff also benefited tremendously from discussions with staff members throughout the Institute.

The result is our five-year strategic plan, composed of values, a core mission, goals, strategies, and tactics. Encompassing time lines and responsibilities, it is a conceptual road map for the Institute's future.

Under the plan, the Institute embraces the following values:

- Society's role in conservation decisions
- Respect for diverse cultural values
- Research
- Education
- Exploration
- Sustainable solutions
- Communication
- Inclusiveness
- Continuous learning and renewal

The core mission of the Institute is now laid out in a single sentence: "The Getty Conservation Institute works internationally to further the appreciation and preservation of the world's cultural heritage for the enrichment and use of present and future generations."

The Institute includes within its main audiences conservation professionals, heritage owners and managers, media and opinion leaders, organizations of the professional world, government decision makers, policy-making bodies, and the general public.

Contained within the GCI's strategic plan are five goals that serve as guideposts for the Institute's efforts in the coming years. These include a dedication to the exploration and generation of new ideas, information, knowledge, and appli-

# THE GCI IN TRANSITION

cations in the field of conservation; an emphasis on research in the conservation of the cultural heritage; public recognition of the importance of cultural heritage and the needs and opportunities for its protection; excellence in education and in the exchange and dissemination of relevant information and knowledge; and staff excellence. Each of these goals includes a series of strategies designed to translate the goals into reality. These strategies, in turn, are supported by specific, supportive tactics.

While the strategic plan in its totality is not cast in stone, we intend to abide by the five goals we have set forth. We may review the strategies from time to time and adapt the tactics as necessary. Implementation of the new plan will require patience, effort, and dedication. Even as we develop new approaches to working with one another and with our partners throughout the world, we will strive to preserve what is good in the GCI's culture.

Ultimately everything we do is in the service of preserving our shared cultural heritage. It is our collective memory. The Institute is committed to ensuring that it remain here for our present use and enjoyment—and for the enlightenment of future generations.

*Miguel Angel Corzo is the Director of the Getty Conservation Institute.*

## *The Getty Conservation Institute's New Home*

*By Sandy Silver*

**The Getty Center under construction. The East Building, in the center of the photograph, is now complete and houses the Getty Conservation Institute. Photo: Warren Aerial Photography.**

**D**uring this summer, the Getty Conservation Institute was the first program of the J. Paul Getty Trust to move to its new and permanent home in the Getty Center, a cultural complex dedicated to the visual arts and humanities.

Designed by Richard Meier & Partners, the Getty Center will by the end of 1997 unite in one facility all of the Trust's Los Angeles-based programs and administrative offices. In addition to the Conservation Institute, the Center will house the J. Paul Getty Museum, the Grant Program, the Research Institute for the History of Art and the Humanities, the Information Institute, the Education Institute for the Arts, and the administrative offices of the Getty Trust. The move will enhance the existing collaboration between the Getty entities in the development of joint programming, projects, and exhibitions.

At completion, the campus-like cultural center will offer specialized facilities for Getty programs and their activities and provide an environment that is both inviting and educational for the general public—as well as conducive to interdisciplinary research and the exchange of ideas by scholars, scientists, and educators. Exhibits, lectures, cultural events, conferences, and concerts will take place at the Getty Center once it opens to the public.

The move to the Getty Center has changed not only the GCI's location but its approach to work space. In order to facilitate the Institute's multidisciplinary approach to projects and to enhance communication among staff, the GCI's new location in the Center's East Building is designed with open workstations rather than enclosed offices. In addition to encouraging staff to share expertise, this design takes advantage of the building's many exterior windows and abundant natural light. To accommodate the many small, simultaneous meetings that take place every day, work areas are interspersed with a number of meeting rooms, each with at least one clear glass wall to maintain the open feeling of the space and to distribute the natural light. Each meeting



The Getty Center's East Building, as seen from its inner courtyard.  
Photo: Vladimir Lange.



Please note the GCI's new address:

1200 Getty Center Drive, Suite 700  
Los Angeles, CA 90049-1684 USA  
Telephone: 310 440-7325

Fax: 310 440-7702

Website address:

<http://www.getty.edu/gci>

room is named for an international cultural heritage site.

In addition to rethinking general work space, the Institute has also taken the opportunity to clarify the function of each of its research laboratories. For example, the environmental analysis lab is separated from the other labs so that trace element testing can be done without interference from other chemical work. Because the research in this lab is often carried out in conjunction with work in the environmental research lab and analytical lab, these labs are adjacent. To prepare the many stone samples from the various sites and monuments, a separate tile cutting room with a floor drain and a dust collector system has been created. A room has also been designed to house the GCI's chemical and materials reference collection. So that visitors may glimpse the laboratory spaces without disrupting the ongoing work, lab doors have glass windows.

To arrive at the hilltop Getty Center—a complex of buildings clad in travertine stone and off-white enameled metal panels (see accompanying article)—visitors and staff will leave their cars in a parking structure located conveniently off the San Diego Freeway (one of the major thoroughfares of Los Angeles), then take a tram up to the Center itself. The tram, a “horizontal elevator” system designed by Otis Transit Systems and the first of its kind on the West Coast of the United States, is completely electric, emission

free, and cable driven. Two automated trams, each holding about 90 people, travel along an elevated guideway, floating on a 1.5-millimeter cushion of air generated by high-powered electric fans; this feature enables the tram cars to consume less energy than if they rode on wheels. The 1.2-kilometer trip takes about four minutes. If a visitor's preference is to take a steep and invigorating walk along Getty Center Drive, there is a parallel walkway, partially shaded by Italian stone pines.

The stone pines are among the eight thousand or so trees planted at the Getty Center; they include coast live oaks on hillsides and white crape myrtles on the walkway between the Getty Museum and the East Building. In front of the Museum are California sycamores, and within the terraced planters of the central plaza are Australian tea trees. A Chinese lantern tree and a flowering Tabebuia tree are planted in the East Building courtyard, and kentia palms with ferns below grow in the garden between the North and East Buildings.

In addition to the general landscaping, there will be a central garden, designed by Los Angeles artist Robert Irwin. The garden will include about five hundred species of plants, including tulips, irises, geraniums, nasturtiums, hydrangeas, sage, crape myrtle, and bougainvillea. A series of London plane trees will form a canopy over a stream that will empty into a shallow pool at the base of a hill.

When the Getty Center opens to the public at the end of 1997, the Villa in Malibu, where the Getty Museum is currently housed, will close for renovations for approximately two years. Changes will include a new auditorium, an outdoor amphitheater, and training laboratories. In addition to displaying the Getty's Greek and Roman antiquities collection, the Getty Villa will become a center for comparative archaeology and cultures, with space for courses, conferences, and exhibitions organized by other Getty programs—including the Conservation Institute.

Within weeks of the GCI's arrival at the Getty Center, the Grant Program and the Education Institute for the Arts also moved to their new facilities. In approximately one year, the Research Institute for the History of Art and the Humanities, the Information Institute, and the Museum will relocate to the Center. For those coming to the GCI in the future to meet with its staff or to participate in on-site events, a visit will offer the opportunity to enjoy the broad range of cultural programming and contemplative spaces that will be found at the new Getty Center.

*Sandy Silver is Manager of Office Services with GCI Administration.*



## Travertine Stone at the Getty Center

By Eric Doehne

**A**s a geologist and conservation scientist, I am often asked about the remarkable travertine stone exterior of the Getty Center. What kind of stone is travertine? Why are there fossils in it? How will it look in 20 years?

Travertine is a product of the earth's water and carbon cycles. As carbon dioxide-rich rainwater percolates through soil and stone, it slowly dissolves tremendous quantities of limestone along underground fissures. Reemerging at the surface as a spring (now saturated with dissolved limestone), this water releases carbon dioxide gas into the atmosphere—much like carbonated mineral water. Because of this “Perrier effect,” the limestone can no longer remain in solution. It recrystallizes, typically as the water cascades over organic films made of bacteria, algae, and mosses. A dense, banded carbonate stone is built up over time as new material covers older layers.

Calcite and gypsum, the minerals that make up about 99 percent of travertine stone, are colorless. The beautiful honey color of the Getty Center travertine actually has its origin in the other 1 percent of the stone: traces of yellow sulfur, brown iron compounds, and organic pigments. The intricate “Swiss cheese” texture of travertine is partly the

result of gas bubbles, which are often trapped between layers of stone, creating spherical voids. Minerals crystallizing on the ever-present bacteria in travertine deposits—like granular snow blanketing a miniature landscape—preserve organic growth forms, called “shrubs,” and produce much of the rugged relief evident across the stone's surface. In some cases, travertine layers are similar to tree rings, with lighter and darker laminations representing seasons of growth.

Travertine is found in greatest abundance where hot and cold springs have been active for tens of thousands of years. The most famous travertine location, and the source of the stone used for the Getty Center, is Bagni di Tivoli, 20 kilometers east of Rome, where travertine deposits over 90 meters thick have been quarried for over two thousand years.

Because travertine is plentiful, weighs less than marble or granite, and is relatively easy to quarry, it was the stone most commonly used by the ancient Romans. Famous structures constructed with Tivoli travertine include the Colosseum, the Trevi Fountain, the colonnade of Saint Peter's Basilica, and many Roman aqueducts. In our century, Lincoln Center in New York and the ABC Entertainment Center in Los Angeles are faced with travertine from the

**Left: A view of the Italian quarry that is the source of the travertine stone used at the Getty Center. Photo: Jim Mawson.  
Right: A Getty Center exterior wall faced with travertine stone. Photo: Vladimir Lange.**



same Tivoli quarries.

While the age of the stone used for the Getty Center is unknown, it probably dates from about 8,000 to 80,000 years ago. The Center's travertine is split with the grain of the stone, making visible many more fossils than are seen in the more common banded travertine, which is cross-sectioned and polished. At least two species of fossilized leaves are fairly common at the Center—evidence of a lakeside environment at the time of the stone's formation. The impression of a feather is preserved in stone at the foot of the curved East Building wall; an unusual bone embedded in a travertine block has also been discovered. The rapid deposition of the travertine layers acts as a natural preservative for these traces of evanescent prehistoric life. Paleontologists at the George C. Page Museum in Los Angeles are working with Getty scientists to identify these fossils.

Over 108,000 square meters of Roman Classic travertine from the Lippiello family quarry at Bagni di Tivoli were used at the Getty Center. In order to remove the travertine from the vertical quarry face, workers drill holes into the stone, outlining a block 6 meters high, 12 meters wide, and 2

meters deep. A diamond-studded cable is then threaded through the holes, lubricated, and pulled against the stone with a set of pulleys. A large cut may take a day and a half, but eventually diamond wins out over the softer travertine. When the cuts are completed, the slab is pushed away from the quarry wall and falls onto mounds of earth, which help cushion the fall. The slab is then broken up into more manageable cubes, which are taken to the Carlo Mariotti factory for honing and splitting. An automated guillotine was created by Mariotti to split the stone along its natural bedding plane. On the average, each block at the Getty Center is 76 x 76 centimeters and weighs 115 kilograms, with a typical thickness of 8 centimeters. About three hundred thousand pieces of stone were used for facades and paving.

The travertine floor surfaces are anticipated to last at least 50 years before replacement in high-traffic areas is needed. High-quality travertine is very durable, since it is formed at the earth's surface in relative equilibrium with the environment. Most other building stones are formed under different conditions, deep underground.

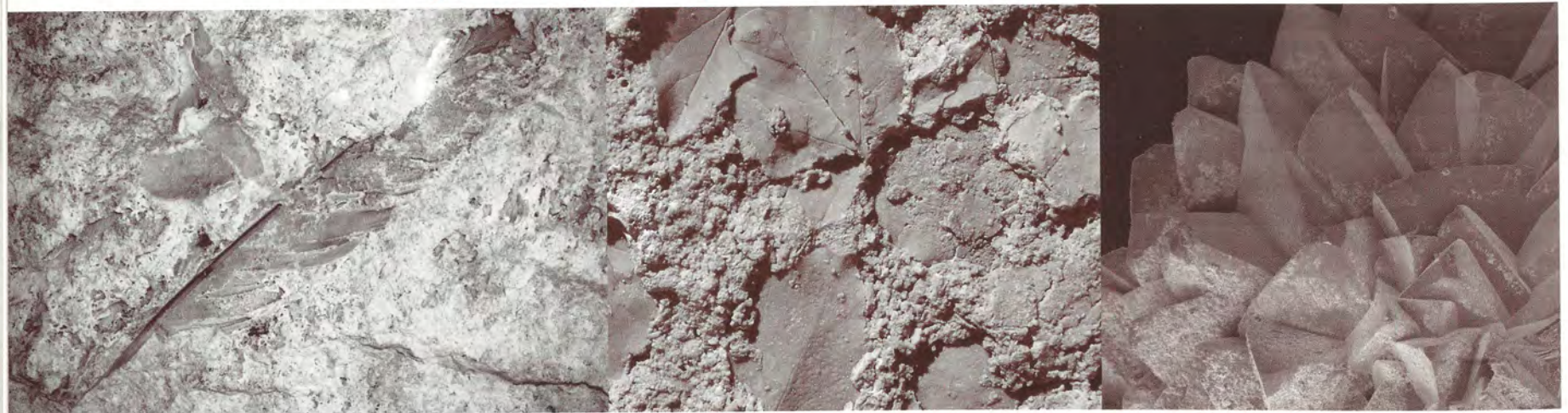
Accelerated aging tests of the travertine stone were

undertaken by two consulting firms and the GCI to determine the suitability of the stone, the mounting system, and the chemical treatments. Each stone block at the Getty Center has been treated with a silicon-based water repellent that is expected to ease cleaning. Paving stone and walls in public areas up to a height of 2.1 meters have also been treated with an oil-resistant coating to reduce soiling. The frequency and methods used to remove dust and soot from the cleft-cut stone will depend on soiling and weathering rates that have yet to be studied fully. Over time, the honey color of the fresh travertine on the Getty Center will change as the stone weathers and a natural patina forms.

In short, the beautifully colored and textured travertine at the Getty Center will offer visitors a wonderful opportunity to appreciate the structure, genesis, and natural history of the stone.

*Eric Doehne is an Associate Scientist with the GCI Scientific Program.*

**Left and center: Fossilized imprints of a feather and leaves in two of the Center's travertine stone blocks. Photos: Dusan Stulik. Right: An electron micrograph of calcite crystals in a block of travertine stone. Photo: Eric Doehne.**



## Urban Conservation Seminars

The first in a series of seminars, "Urban Conservation: Current Practices and Future Directions," was held at the GCI on March 20, 1996. The seminar was organized for professional staff from the GCI, the Getty Grant Program, and the Getty Research Institute for the History of Art and the Humanities who are coordinating international projects for the conservation of historic human settlements.

The conservation of historic city centers is among the most complex of conservation undertakings. The challenge is balancing preservation with the legitimate needs of the local population for modern services. At the seminar, key emerging issues and research on urban conservation methodologies were presented by Senior Program Coordinator Lori Anglin and Research Fellow Cristina Iamandi of the GCI. Invited speakers described leading regional approaches from North America, Australia, Asia, and Europe. The topics addressed included definitions of urban conservation and historic urban centers, values being protected in urban conservation, operation of large-scale conservation programs, and identification of priorities. Presentations were followed by a discussion of various approaches and future directions in conserving historic towns and cities.



Giora Solar

On April 18, 1996, as another part of this seminar series, the Master Plan of Akko, Israel, was presented for discussion to senior staff of the GCI. Akko is one of Israel's most important historic cities, as well as one of the world's oldest towns—in fact, it is mentioned in Egyptian sacred texts of the 19th century B.C.E. The old city was the main port during the Crusader period (11th–13th centuries) and the capital of the Crusader kingdom after the conquest of Jerusalem by the Muslims. Today Akko retains its Crusader-Ottoman character: its minarets and domes, vast archaeological resources, labyrinth of streets, and Arab markets all contribute to the old town's popularity as a tourist attraction.

The Akko Master Plan is designed to balance economic development through tourism with the conservation of the city's historic features. Key members of the Israeli interdisciplinary project team described the scope of the work, its aims, goals, and actions. The seminar was moderated by GCI Training Program Director Marta de la Torre.

### Urban Conservation Seminar Speakers

#### Carlo Cesari

*Consultant Architect and Urban Planner, Ferrara, Italy*

*Director, International Centre for the Conservation of Architectural Heritage, Venice*

*Director, European Centre for Craftsmen Training in the Conservation of Architectural Heritage, Venice*

#### Scott Cunliffe

*Consultant Architect and Conservation Planner  
Cultural Management Consultants, Los Angeles*

#### Elizabeth Jackson

*Urban Planner, Executive Director of the Society of Environmental Graphic Design, Washington, D.C.  
Former Program Manager, National Trust for Historic Preservation's National Main Street Center*

### Akko Seminar Speakers

#### Arie Rahamimoff

*Consultant Architect and Planner, Jerusalem  
Architect and Head, Planning Team for Akko  
Master Plan*

#### Giora Solar

*Special Projects Director, GCI  
Former Director of Conservation, Israel Antiquities  
Authority*

#### Khawla Abu Baker

*Sociologist responsible for sociological aspects  
of Akko Master Plan*

## Inter-American Symposium

The United States Committee of the International Council of Monuments and Sites (US/ICOMOS), in partnership with the GCI and the San Antonio Conservation Society, organized the Inter-American Symposium on Authenticity in the Conservation and Management of the Cultural Heritage, held in San Antonio, Texas, March 27–30, 1996. The meeting—attended by 135 people, including the chairmen and representatives of 16 national ICOMOS committees from the Americas—discussed the meaning of authenticity in preservation in the context of this hemisphere, as well as its implications for the management of cultural heritage.

This is one of several ICOMOS regional meetings being held around the world in preparation for the October 1996 ICOMOS General Assembly in Sofia, Bulgaria, where the issue of authenticity in preservation will again be addressed. (The European ICOMOS symposium took place in the Czech Republic and the African meeting in Zimbabwe.)

Authenticity is the foundation upon which all preservation work is built. In recent years the concepts of authenticity and value have been increasingly subject to examination and debate. The San Antonio meeting addressed the issue from the perspectives of archaeological resources, architecture and urbanism, and cultural

landscapes. Recommendations developed by symposium participants formed the “Declaration of San Antonio,” which the ICOMOS National Committees of the Americas will take to the world forum in Sofia.

Margaret Mac Lean of the GCI chaired the Scientific Committee for the symposium, which was responsible for designing the program, identifying the speakers, writing the United States position paper, and managing the meeting. The Scientific Committee was composed of Michael Taylor, Deputy Director for New Mexico State Monuments, Museum of New Mexico; Carol Shull, Keeper of the National Register of Historic Places of the National Park Service (NPS); Randolph Langenbach of the Federal Emergency Management Agency; Gustavo Araoz, Executive Director of US/ICOMOS; and Nora Mitchell, Director of the Olmstead Center for Landscape Preservation, NPS.

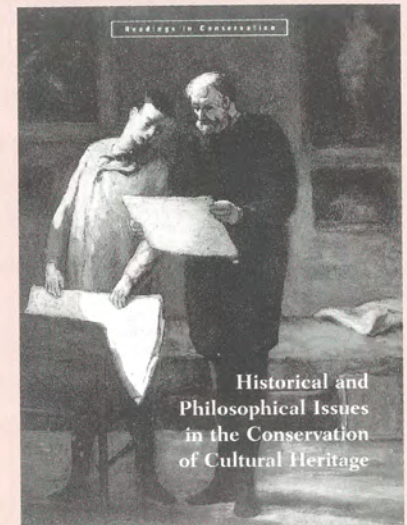
The Getty was represented by Marta de la Torre and Erica Avrami of the GCI and by Tim Whalen and Joan Weinstein of the Getty Grant Program.

Publications

## Historical and Philosophical Issues in the Conservation of Cultural Heritage

*Edited by Nicholas Stanley Price, M. Kirby Talley Jr., and Alessandra Melucco Vaccaro*

This premier volume of the GCI's Readings in Conservation series, *Historical and Philosophical Issues in the Conservation of Cultural Heritage*, is the first comprehensive collection of texts on the conservation of art and architecture to be published in the English language. Designed for students of art history as well as of conservation, the book consists of 46 texts, some never before translated into English and many originally published only in obscure or foreign journals. The 30 major art historians and scholars represented discuss questions such as when to restore, what to preserve, and how to maintain aesthetic character. Among the volume's selections are excerpts from the following books and essays: John Ruskin, *The Seven Lamps of Architecture*; Bernard Berenson, *Aesthetics and History in the Visual Arts*; Clive Bell, “The Aesthetic Hypothesis”; Cesare Brandi, *Theory of Restoration*; Kenneth Clark, *Looking at Pictures*; Erwin Panofsky, “The History of Art as a Humanistic Discipline”; E. H. Gombrich, *Art and Illusion*; Marie Cl. Berducou, “The Conservation of Archaeology”; and Paul Philippot, “Restoration from the Perspective of the Social Sciences.” The fully illustrated book also contains an annotated bibliography and an index.



Nicholas Stanley Price is former Deputy Director of the Training Program at the Getty Conservation Institute. M. Kirby Talley Jr. is Project Coordinator for Conservation and Restoration at the Directorate for the Management of National Cultural Property in Amsterdam. Alessandra Melucco Vaccaro is affiliated with the Ministero per i Beni Culturali e Ambientali in Rome.

520 pages, 7 x 10 inches

57 color and 32 b/w illustrations

ISBN: 0-89236-250-2, cloth, \$55.00

ISBN: 0-89236-398-3, paper, \$39.95

M. Kirby Talley Jr., one of the editors of *Historical and Philosophical Issues in the Conservation of Cultural Heritage*, himself contributed two extraordinary essays to the anthology. These essays tie the volume's readings together by persuasively articulating the enrichment art provides and the role conservation should play in preserving that value. Here Dr. Talley talks about the philosophy and goals that prompted the creation of the book:

The thinking behind this volume is mirrored in the title of the book: *Historical and Philosophical Issues in the Conservation of Cultural Heritage*. The idea was to bring together very diverse readings to explore issues that have been insufficiently highlighted in recent times and to reexamine certain ways of looking at, appreciating, and conserving art that have more or less disappeared from general thinking.

What this book is really trying to do is put the conservation of the work of art into a much broader context, both from a philosophical and an aesthetic point of view. Even in the sections on intervention, the original intent of the artist and the broader issues of intervention—and what that really means—are the focus. These are matters that art historians, conservators, and conservation scientists should do a great deal of thinking about. In some ways there has not been enough thought given to the broad, basic issues of why we want to preserve something at all.

If you're a conservator, you have to look at, think about, and appreciate an object before you actually get involved in the technical side. Obviously a good conservator has to know all the treatments and be able to carry them out with the utmost ability and sensitivity. When you get into the area of sensitivity, a book like this can play a role because it makes one think.

*Historical and Philosophical Issues* contains ideas necessary not only to conservation but to art history as well. A lot of the way that art history is taught these days deals with documentary sources, materials, and the life and times of the artist—all of which are very legitimate and extraordinarily important. But these things are not the be-all and end-all in terms of art or its appreciation. The book attempts to balance this approach by opening up a whole realm of thinking by many writers who are today considered rather passé. How can anybody who's ever had anything sensible and wonderful to say be out of date? Somebody like John Ruskin, such a perceptive critic, had a very eloquent style of writing that's less fashionable than the kind of nuts-and-bolts writing popular these days. But his approach to these issues and his ebullient prose are, I think, very relevant to a society enraptured with technology and things that can be of 'proven practical benefit.' Of course, the most practical benefit of a work of art is its spiritual content, its pleasure content, what it gives in terms of refreshment. And it is the conservator's great role to protect these values through the conservation of the physical object.

Beyond art history students, I think the book is relevant to scientists who want to get into the field or who are already in the field. It would also be of interest to the public that goes to museums or exhibitions and is interested in such controversies as the one over the cleaning of Michelangelo's paintings in the Sistine Chapel. A book like this can give people some insight into the type of thinking relevant to the conservation issues raised by such projects.

Basically this book is designed to help people consider more subtly the direct relationship between historical and philosophical issues and practical and technical issues. It should sharpen thinking and open up discussion. It doesn't set out to tell what is right and wrong—that was never the intent. It has been put together to make people think.

## Cumulative Index to ATAA Volumes 11-25

Upcoming  
Events

## The GCI Visiting Committee

A two-volume subject and author index to 15 years of *Art and Archaeology Technical Abstracts*, covering approximately 29,000 abstracts published between 1974 and 1988, is now available.

*Volume One: 1174 pages*

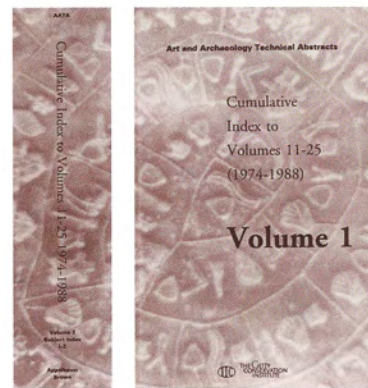
ISBN: 0-89236-407-6

*Volume Two: 1234 pages*

ISBN: 0-89236-408-4

*Institutions \$135.00*

*Individuals \$70.00*



From September 24 to 25, 1996, the Getty Conservation Institute's Visiting Committee will make its first visit to the GCI at its new home in the Getty Center.

Since its inception, the Institute has benefited from the advice and counsel of its Visiting Committee. Composed of distinguished experts from diverse areas of the conservation field, the Committee was formed by Harold Williams, President of the J. Paul Getty Trust, to advise him and the GCI's Director on the Institute's program policy and endeavors. The first official meeting of the Committee was held in 1983—even before the Institute was officially established. During those early years the Committee helped give shape and direction to an organization that was still in the process of being born. While membership in the group over time has changed, it has continued to play an important role as the Institute's staff has ventured into new areas of research, training, and documentation, as well as out into field projects.

Today the Committee meets every 9 to 12 months with the GCI's senior staff, its Director, and the President of the Getty Trust, in order to review the activities of the Institute and to consider plans for the future. These gatherings focus on important new developments, as well as on providing Committee members with updates on ►

Members of the GCI's Visiting Committee at the Institute in 1995. From left: Norman H. Tennent, Selma Al-Radi, Paul N. Perrot, GCI Director Miguel Angel Corzo, Agnes Gräfin Ballestrem, Heather Lechtman, and Augusto Molina Montes. Not shown: Hubertus von Sonnenburg and Joyce Hill Stoner. Photo: Dennis Keeley.



Institute projects. The meetings, which last several days, include presentations by staff and extensive discussions, and they conclude with an executive session between the Committee and the Trust's President.

Paul Perrot, who was among the conservation experts consulted by the Getty Trust in the days before the GCI was created, has served on the Visiting Committee for the past four years. He sees the Committee's function, in part, as planting ideas and being "the impartial reactor" to the Institute's activities. He also believes that the group "acts as a sounding board for the staff and Director, as well as for Harold Williams, and serves as ears for the Institute in passing on the reactions and questions that the conservation field may have regarding the approach the Institute is taking to conservation issues."

One approach that has been gratifying to the Visiting Committee is the Institute's current push toward greater interdisciplinarity in its work. "I think that there is great enthusiasm on the part of the members of the Committee," says Mr. Perrot. "At the last few meetings, there was a sense that things were jelling."

For Harold Williams, the President of the Getty Trust, the Visiting Committee "fulfills a very important function for the Institute—as similar committees do for

the other Getty entities—by playing the role of loving critic, bringing a depth of understanding to its examination of the Institute's work."

#### Current Members of the Visiting Committee

##### Selma Al-Radi

*Consultant Archaeologist*  
Research Associate, Institute of Fine Arts,  
New York University  
New York

##### Agnes Gräfin Ballestrem

*Director, Central Research Laboratory for Objects of Art and Science*  
Amsterdam

##### Heather Lechtman

*Director, Center for Material Research in Archaeology and Ethnology, Massachusetts Institute of Technology*  
Cambridge, Massachusetts

##### Augusto Molina Montes

*Professor, National Institute of Anthropology and History*  
Mexico City

##### Paul N. Perrot

*Retired Director, Santa Barbara Museum of Art*

##### Joyce Hill Stoner

*Director, Art Conservation Program, University of Delaware*  
Newark

##### Norman H. Tennent

*Conservation Consultant*  
*Associate Scientist, Central Research Laboratory for Objects of Art and Science*  
Amsterdam

##### Hubertus von Sonnenburg

*Chairman, Paintings Conservation, Metropolitan Museum of Art*  
New York

#### Former Members of the Visiting Committee (Affiliations at time of service)

##### Arthur Beale

*Director of Research, Museum of Fine Arts*  
Boston

##### Gérard Bolla

*Advisor to the Director General of UNESCO*  
Paris

##### Norman Brommelle

*Secretary General, IIC*  
London

##### W. Thomas Chase

*Head Conservator, Freer Gallery of Art, Smithsonian Institution*  
Washington, D.C.

##### William Considine

*Retired Vice President, Ciba-Geigy Corporation*  
Hawthorne, New York

##### Gaëli de Guichen

*Assistant to the Director for Special Programs, ICCROM*  
Rome

##### Jorge E. Hardoy

*President, Instituto Internacional del Medio Ambiente y Desarrollo IIED-América Latina*  
Buenos Aires

##### Christian Lahanier

*Laboratoire de Recherche des Musées de France*  
Palais du Louvre  
Paris

##### Hubert Landais

*Former Director, Musées de France, Palais du Louvre*  
Paris

##### Herbert Lank

*Picture Restorer*  
London

##### Liliane Masschelein-Kleiner

*Director, Institut Royal de Patrimoine Artistique*  
Brussels

##### Evan Turner

*Director, Cleveland Art Museum*  
Cleveland



## GCI Arrives on the Internet

The Institute has launched a Home Page on the World Wide Web, which allows easy access over the Internet to information both textual and graphic. Accessible from PC compatibles or Macintosh computers, the Home Page enables the GCI to reach new audiences, convey its mission and goals, enhance research capabilities for conservation professionals, and increase awareness of the importance of preserving the world's cultural heritage. General information on conservation and descriptions of the activities of the Institute are available on the Home Page. Users will also find updates on the GCI's new facilities at the Getty Center, electronic newsletters, and publication notices.

The GCI Home Page features hyperlinks—quick connections to other websites, accomplished with the click of a mouse—to numerous institutions and agencies involved in conservation and related fields. Some examples are museums, government agencies, and professional organizations. Subject areas covered include conservation and conservation science, archaeology, anthropology, geographic information systems, global positioning systems, remote sensing, and surveying.

The address of the Institute's website is <http://www.getty.edu/gci>  
Comments and suggestions are welcomed.

## Martha Demas



Dennis Kealey

### *Project Manager, Special Projects*

It was only after leaving Massachusetts to attend a small college in Athens, Greece, that Martha Demas developed an interest in the past that would ultimately lead her to conservation. Her two years in Greece introduced her to archaeology, and when she transferred to the University of New Hampshire, her studies focused on Greek literature and history. She went on to earn a master's degree in classics at Duquesne University, Pittsburgh, and a Ph.D. in archaeology from the University of Cincinnati.

Dr. Demas specialized in Aegean archaeology of the Late Bronze Age, intrigued by the artistic achievement and the remarkable interaction of peoples in the Mediterranean during the period. She did most of her fieldwork in Cyprus and, after receiving her doctorate, returned there to work for three years with the Department of Antiquities on several excavations and publications. Her fieldwork convinced her that much needed to be done to prevent the degradation of excavated sites and the resulting loss of important material. Enrolling at Cornell University in Ithaca, New York, she earned a master's degree in historic preservation planning, writing her thesis on post-excavation site conservation.

While working in Cyprus, she first met members of the GCI staff. In 1990 she became a Fellow in the Institute's Training Program, helping develop courses on the conservation and management of archaeological sites. Wanting more active involvement in site preservation, she moved to Special Projects in 1992, working on the GCI's field projects at Chaco Canyon, Xunantunich, and Laetoli. Her participation in the Laetoli project has been particularly satisfying, providing her with the unique opportunity to contribute to the preservation of a site so significant to our understanding of human evolution.

In 1994, shortly after becoming a Conservation Specialist with the Institute, she was made Acting Director of Special Projects, a position she held until December 1995. While continuing her fieldwork, she would like to devote more time to writing about the results of her projects and what has been learned from them. She also wouldn't mind spending a little time in the small stone house on Cyprus that she bought during her years as an archaeologist in the field.

## Jacqueline Zak



Dennis Kealey

### *Research Specialist, Documentation*

Even at the age of 10, Jackie Zak displayed an inclination toward archaeology, digging up parts of her grandmother's backyard in Flint, Michigan. In college at Michigan State University, she majored in anthropology, specializing in prehistory, and one summer she worked on a field project in northern California. That convinced her that California was where she wanted to live. Even so, after college she returned to Flint and spent the next three years working at the Alfred P. Sloan Jr. Museum, which housed a local history collection. It was there that she first became interested in conservation.

When the Sloan Museum job ended, she moved to Los Angeles. Soon she was volunteering at UCLA's Institute of Archaeology and working as a consulting archaeologist as part of several cultural resource management projects. Around that time, she enrolled at California State University, Northridge, to earn a master's degree in anthropology, specializing in archaeology. While there she took courses on conservation and preservation, one of which was organized by the Getty Museum. She also worked for the U.S. Forest Service as an archaeologist and participated in field campaigns in New Mexico and Peru, where she studied prehistoric agricultural techniques. Her work in

Peru formed the basis of her thesis.

Following her long-term interest in conservation and a new interest in on-line databases, Ms. Zak joined the then-embryonic GCI in 1985. From the start she was part of the Documentation Program, first as a book cataloguer, later as a research assistant for *AATA*. In 1987 she became Data Management Coordinator for the Conservation Information Network (CIN), leading a team that developed database standards, procedures, and tools to improve data input, organization, and access. After management of CIN was transferred to the Canadian Heritage Information Network, she assumed her present position overseeing database research support for GCI staff.

Her professional involvements include participating in the Data Standards Working Group of ICOM's International Documentation Committee and serving as the Documentation Committee Chair for the Society for the Preservation of Natural History Collections.

IN ACCORDANCE WITH THE GCI'S CONCERN FOR THE ENVIRONMENT THIS NEWSLETTER IS PRINTED ON RECYCLED PAPER



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