



# XXII SYMPOSIUM OF ARCHAEOLOGICAL INVESTIGATIONS IN GUATEMALA

ARCHAEOLOGICAL SITES IN THE MAYA AREA:  
A CONSERVATION CHALLENGE

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SUMMARY



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The Getty Conservation Institute works internationally to advance conservation practice in the visual arts—broadly interpreted to include objects, collections, architecture, and sites. The Institute serves the conservation community through scientific research, education and training, model field projects, and the dissemination of the results of both its own work and the work of others in the field. In all its endeavors, the GCI focuses on the creation and delivery of knowledge that will benefit the professionals and organizations responsible for the conservation of the world's cultural heritage.



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# Preface

The cultural groups that developed through time in the Maya area constituted one of the great cultural traditions of the world, developing in a territory that today includes portions of Mexico and Central America. The Maya civilization has been the focus of attention of scholars and academics since the 19th century and continues to be the center of numerous research and conservation programs. As archaeological research has progressed, new methods have been developed to better understand decay mechanisms and to design intervention alternatives that enhance the understanding and presentation of this important historic legacy. Although there has always been concern about the decay of materials and structures, in recent years the importance of considering conservation possibilities prior to any action has been underscored, as well as the need to implement articulated and sustainable actions at sites.

The Tikal Association is a nonprofit cultural entity, founded in 1964 in Guatemala City. It centers its efforts on the protection and conservation of pre-Columbian and historic heritage in Guatemala and on the cultural traditions of today. The Association promotes the dissemination of knowledge about this heritage, implements study and research programs, and supports museums and similar entities. Since 1987, they have collaborated with heritage institutions in Guatemala and with the National Museum for Archaeology and Ethnology to organize the Symposium of Archaeological Investigations in Guatemala. Each year, this forum brings together more than three hundred professionals carrying out research projects in Guatemala and the Maya region as a whole to exchange information and to present the latest progress of projects at specific sites.

Within the framework of the Maya Initiative, a historic heritage conservation project focused on Mesoamerica, the Getty Conservation Institute (GCI) undertook a conservation management planning project

at Joya de Cerén in El Salvador and the methodology for the study of the state of conservation and the definition of a conservation strategy for the Hieroglyphic Stairway of Copán, Honduras. To share the results from these projects and other conservation programs in the region, the GCI proposed to the symposium organizers the structuring of a conservation panel in the symposium, to highlight the importance of considering and integrating conservation during the different phases of an archaeological project, from excavation to site presentation.

This publication presents the results from the conservation panel Archaeological sites in the Maya area: a conservation challenge, developed for the XXII Symposium of Archaeological Investigations in Guatemala. The publication includes a brief introduction to the Maya area and the work carried out by the GCI, a presentation of the structure and contents of the panel, the conclusions derived from the dynamic discussion during the panel between professionals and other participants involved in the research, conservation and presentation of sites in the Maya region, the schedule of the presentations and their respective abstracts. The full presentations are only included in the Spanish version of this publication.

This publication constitutes an important step in the research, conservation and use of archaeological heritage, as it reflects how different disciplines collaborate and the importance of sustainability for site conservation and management.

The success of the meeting would not have been possible without the valuable collaboration and contributions of the members of the Tikal Association, the organizing committee for the symposium, the panelists and numerous individuals from participating institutions who worked to develop and organize the panel.

**Françoise Descamps and Juan Antonio Valdés**  
Panel moderators



# Introduction

Carolina Castellanos

## Preliminary considerations about the Maya area and challenges for the conservation of heritage

Cultural and natural heritage in Mesoamerica is as rich and diverse as the cultures that created it through time and the ecosystems in which they thrived. This cultural region, first denominated as such by Paul Kirchhoff in 1943, encompasses an area between 10° and 22° northern latitude and includes central and southern Mexico, Guatemala, Belize, El Salvador and some portions of Honduras, Nicaragua and Costa Rica.

Over more than 3,000 years of evolution, cultures in Mesoamerica evidently had territorial shifts and significant variations in cultural aspects. Features that were later considered as typical of Mesoamerican groups were generated at different moments and places, and separated by a considerable distance. It is only through the interrelation of people, occurring across several centuries, that a cultural platform was created which later integrated different groups under the so-called traditions and features of Mesoamerica.

Various groups in the area reached a high level of cultural sophistication, reflected in the great cities, art, architecture, etc. that evidence complex social, political, economic and religious organizations. Arts and sciences had specific characteristics in different areas; the diversity of natural environments also played an important role in development processes, by offering inhabitants conditions and opportunities to develop various responses. Features that characterize Mesoamerican cultures include the construction of ballcourts, slash and burn agriculture, hieroglyphic writing, human sacrifice, construction of stepped pyramids and a 365-day calendar divided into 18 months of 20 days plus

one month of five extra days (called *nemontemi* by the Aztecs and *uayeb* by the Maya). Societies were hierarchical and differentiated into groups that included merchants, warriors, artisans, farmers and religious and political elites.

Archaeological sites in the Maya area, developed through different periods, reflect the adaptation of different groups to their environment and landscape and consequently reflect different stylistic features and architectural technology, responding to particular ideologies and the availability of certain construction materials. The diversity of materials and cultural features entails a significant challenge for the conservation and management of heritage places. One of the most significant is the deterioration of prehispanic construction materials. To address this issue, a precise knowledge and methodological analysis is needed so as to understand the interrelation of all factors involved in complex deterioration mechanisms. Consequently, conservation projects must consider both the conditions inherent to the environment as well as the specific transformations of materials themselves and the effects derived from inadequate conservation and management practices.

Material deterioration varies from site to site and even within the same building or decorated feature, depending on factors such as climate, cultural context, design and construction technology as well as the materials themselves. Decay is considered as the transformation initiated by one or several agents, such as water, temperature, wind, biological agents, pollutants, etc. However, decay is also a mechanism, inherent to material properties and behavior,

which attempts to stabilize in specific environmental conditions so as to reach equilibrium.

Deterioration is considered as the result of two types of processes: physical and chemical, and the causes and effects for these processes are closely linked and cannot be disassociated easily. For example, stone alterations can result from the chemical conversion of minerals and binding materials that form the core of the stone (a process derived from water or humidity penetration) or it can result from physical processes, such as mechanical disaggregation. These processes can be exacerbated by temperature changes, fluctuations in humidity levels or specific local influences. In most cases, humidity is an essential factor because it promotes mechanical and chemical processes that result in material loss, decreased material resistance and disaggregation, among other effects. It also promotes salt migration and crystallization and creates adequate conditions for microbiological and vegetation growth.

Human activities also promote decay as a consequence of transformations in the environment, including deforestation, that affect climatic conditions, acid rain, etc. Visitors contribute to material decay directly and indirectly, for example, by producing surface erosion and, in some cases, being responsible for vandalism.

To address these conditions, significant efforts as well as financial resources are required to allow for the exhibition of archaeological remains in situ. Unfortunately, some of the decay mechanisms evidenced today can be attributed to prior interventions. Many of these were implemented with the available technology but without taking into account the causes and effects of material decay; in other cases, new materials were used without having evaluated their results in the short and long term. Most of the interventions carried out to date include structural interventions, surface consolidation, chemical and mechanical cleanings, salt and microbiological growth removal, and even complete restorations of lacunae. Protective shelters and reburial remain controversial interventions at archaeological sites. Both interventions require balancing diverse is-

ues, from technical considerations to long-term maintenance possibilities and the availability of human, material and financial resources. Also, these interventions change the context of the place, affect other archaeological remains, alter or generate new environmental conditions and undoubtedly impact the values of the place.

Even though research and conservation in the Maya area have been underscored since the early 19th century, there are still important needs that have to be holistically addressed, including the vulnerability of prehispanic materials to the environmental conditions of the area and the alternatives and methods for efficient, adequate and sustainable interventions. Likewise, there are critical problems that have not been comprehensively solved, such as looting and the ecological and social impacts derived from unplanned and uncontrolled development, including unregulated tourism practices. All these elements play a role and influence the current state of archaeological sites, and impact their valorization and recognition as significant areas by different groups.

Success stories and lessons learned are critical elements to continue to move forward and enhance current research, conservation and presentation practices at archaeological sites in the Maya area. The challenge is to preserve and balance the values of the past with the needs of the present and the responsibilities for the future.

### **The Getty Conservation Institute's Maya Initiative**

For the past eight years, the Getty Conservation Institute (GCI) has implemented the Maya Initiative project in collaboration with institutions responsible for cultural heritage in the Maya area. The project developed out of discussions held during visits to El Salvador, Honduras and Guatemala, as well as during working meetings in Los Angeles, Mérida (Mexico) and Antigua (Guatemala) between 1995 and 1998. The working meetings included staff members of the

GCI and representatives from cultural heritage institutions such as Concultura in El Salvador, IDAEH in Guatemala and IHAH in Honduras.

The Maya Initiative falls within the mission of the GCI, which works internationally to advance the field of conservation through scientific research, field projects, education and training, and the dissemination of information in various media. In its programs, the GCI focuses on the creation and delivery of knowledge that will benefit the professionals and organizations responsible for the conservation of the visual arts. The GCI is a program of the J. Paul Getty Trust, an international cultural and philanthropic institution that focuses on the visual arts in all their dimensions, recognizing that cultural awareness, creativity, and aesthetic enjoyment are essential to a vital and civil society.

In this respect, the GCI does not focus on specific interventions in its field projects but rather on the development and promotion of methodologies that will generate feasible and holistic alternatives for heritage conservation. Consequently, the Maya Initiative had a regional focus that sought to strengthen the conservation of cultural heritage in the Maya area through the development of projects of common interest to participating countries.

These projects included, among others, site management planning, research on the decay of prehispanic construction materials (mainly earth and stone) and alternatives to mitigate deterioration, development of methodologies to address structural issues in monuments and appropriate conservation options, and requirements and criteria for the construction of protective shelters and their effects on archaeological remains and site presentation.

In June of 2007, projects undertaken at Joya de Cerén in El Salvador and Copán in Honduras were formally concluded. The GCI is now working to disseminate the results of these projects to a broader audience, both in terms of methodological issues, as well as the analysis of materials, development of intervention proposals, and other topics.

## **The Symposium of Archaeological Investigations in Guatemala**

The Symposium of Archaeological Investigations in Guatemala is organized annually and it is an important forum in the region to discuss themes related to site research, conservation and management in the Maya area. Considering the need for dissemination of the Maya Initiative projects and the importance of the Symposium at the regional level, the GCI coordinated with the organizers of the XXII Symposium to structure a conservation panel to gather researchers from the area to discuss the conditions being faced today and the diverse approaches to address them. It is expected that the results from the guided discussion will be of use both for professionals in the field and decision-makers related to these heritage sites, as well as a broader audience involved with archaeological heritage.



# Structure and content of the discussion panel

The purpose of this panel was to bring together professionals with expertise in the investigation, conservation and presentation of archaeological sites in the Maya area so as to share experiences and knowledge and to identify recommendations useful for practitioners in the field. Given that the panel was designed to occur within the context of the Symposium of Archaeological Investigations in Guatemala, participants, as well as the publication audience, includes a diverse range of professionals, including scientists, site managers, conservators, archaeologists and representatives from the tourism sector.

The objectives of the panel were to:

- Examine diverse methodological approaches to archaeological site research, conservation and presentation in the Maya area, through the presentation of case studies;
- Contrast interventions at the site level to theoretical frameworks at the international level;
- Explore different approaches to archaeological site management and management plan implementation in different contexts; and
- Evaluate the diverse circumstances that influence decision-making for research, conservation and presentation at archaeological sites.

The panel was structured to be small, intensive, and focused on the critical analysis of three main themes:

- Integration of archaeological research and conservation;
- Conservation of archaeological materials: methodological approaches, interventions and alternative protection measures (shelters, reburial, etc.); and
- Site management: challenges in reconciling values, attaining sustainability and balancing conservation and presentation.

## **Theme 1: Integration of archaeological research and conservation**

Excavation of archaeological remains immediately raises concerns for the conservation of exposed materials; consequently most research projects need to foresee stabilization and conservation needs. However, archaeological conservation decisions are often influenced by the broader political and social context, and there are often conflicts between the interests of both disciplines, particularly when conservation endeavors are considered solely a technical matter.

Questions that were considered by speakers in this theme included the role of conservation as a discipline and its integration in decision-making or archaeological project design; the importance of collaboration between archaeology and conservation and the factors that impede effective working relationships; human and financial resource implications for integrated archaeological research and conservation practices; the limitations imposed by conservation conditions on archaeological research objectives; and the conflicts of interest between archaeology and conservation and the common responsibility as practitioners in regard to archaeological heritage.

Daniel Juárez presented an overview of the philosophy and principles for conservation, making reference to seminal conservation texts and charters to substantiate the conceptual approach used in the case of Yaxchilán, Mexico, for research and conservation, and implications for the interventions carried out. Vilma Fialko presented the significant challenges faced when addressing the conditions at archaeological sites deeply impacted by looting and lack of maintenance, analyzing the specific case of

Naranjo, Guatemala, and the progress made to date at the site. Richard Hansen and his co-authors spoke about the case of Mirador in Guatemala to illustrate the discussion themes of the panel and the interventions carried out to date for the conservation and presentation of the site's cultural and natural heritage.

**Theme 2:  
Conservation of archaeological materials: methodological approaches, interventions and alternative measures (shelters, reburial, etc.)**

Conservation of archaeological materials poses significant challenges in terms of physical properties and decay mechanisms as well as the different natural environments in which sites are located. Excavating materials breaks the equilibrium reached over the period in which sites were buried and promotes new cycles of decay. Deterioration is accelerated upon exposure and later on becomes progressive as materials stabilize in the new exposure environment. However, reburial upon excavation, without conservation, is not a simple solution as materials will undergo new processes as equilibrium is sought in the reburied environment. Other alternative measures, such as protective shelters, are often controversial decisions for the impact they pose on the integrity of archaeological sites.

Speakers in this theme addressed decay processes by focusing on gaps in knowledge and the importance of research and actions to mitigate deterioration factors; limitations on interventions or conservation alternatives, since no single solution is applicable to all sites and courses of action should respond to specific conditions; the consequences of prior unsubstantiated decisions (conservation interventions as a source of deterioration); the impact of conservation interventions and their impacts on values and significance; the notions of compatibility, reversibility and efficacy; the importance of technical capacity; and maintenance and monitoring as a continuous process, and its implications on sustainability of resources.

Thomas Roby, Eliud Guerra and Rufino Membreño discussed the methodology designed for the systematic study, assessment and proposal development for the exceptional case of the Hieroglyphic Stairway in Copán, Honduras. They also presented the specific proposals for its conservation, maintenance and monitoring plan. Rudy Larios reflected on the challenges faced in the case of Tikal, Guatemala, from the first archaeological excavations to its current conditions, underscoring the importance of observation, recording and monitoring to ensure the sustainability of the implemented actions and to guarantee the understanding of decay phenomena.

**Theme 3:  
Site management: challenges in reconciling values, attaining sustainability and balancing conservation and presentation**

Management has long been recognized as the most comprehensive response to conditions affecting archaeological sites. There are different methodological approaches to establishing management systems and challenges to face in each particular context. Cross-cutting issues include sustainability, continuity and conflicting values that hinder holistic conservation and management practices.

Some of the issues considered by presenters comprised the analysis of management planning processes; the role of planning as an integrative tool among different disciplines and sectors, and as a tool for reconciliation of interests as a mechanism for international cooperation; the "good use" of archaeological sites in terms of tourism, tangible and real benefits to communities and contribution to development; the management of a cultural and natural landscape in regard to the respect and valorization of traditions, ways of life, indigenous rights, social inclusion and mechanisms to sustain participation; and sustainability in the use of heritage resources and in the implementation of strategies. Also considered were the importance of sustained investments and the availability of resources; tech-

nical capacity; levels of responsibility and decision-making, particularly focusing on documentation as a tool for managing cooperation and for the articulation of decisions; the importance of strategic alliances and synergies, so as to integrate archaeological heritage in macro agendas (development, land use, etc.); and the notion of management as a cyclic process.

Carolina Castellanos and Françoise Descamps presented the case of Joya de Cerén in El Salvador, reflecting on the lessons they learned by putting a theory of planning into practice. They included thoughts about the challenges faced today in the implementation of the management plan and highlighted the importance of continuity for the sustainability of projects. Anabel Ford discussed the case of El Pilar in Belize, analyzing the presentation and use of an archaeological site as the axis for local community development. She examined the fundamental texts that exist to date to reflect on presentation and the degrees of intervention at archaeological sites that allow for a balance between the needs of heritage, visitors and local communities to be reached.



# Considerations derived from the discussion panel

The last session of the panel focused on the discussion of the presented papers and guided assessment of issues to address each of the themes, namely, the integration of archaeological research and conservation, the conservation of materials and site management. In addition, issues related to current criteria and approaches towards conservation, and the balance between research, conservation and presentation and between heritage and development, were also examined.

In regard to the integration of archaeology and conservation, panelists considered a variety of topics. First, archaeological excavation immediately creates the need to conserve materials that are suddenly exposed to different conditions than the ones that had given them stability during burial. Consequently, it is critical that stabilization and conservation needs are considered from the planning stages of archaeological research projects and conservators are involved in that planning.

In practice, there continues to be a professional separation between the archaeology and conservation fields. This is largely due to the limited knowledge about conservation as a professional field and also because many archaeological schools still do not convey the conservation message to their students. Likewise, conservators often have not been trained to understand the objectives and goals of archaeology. Conservation has yet to be fully integrated as a professional field, with scientific methods and approaches, and not only as a technical endeavor in archaeological projects. Also the directives and foundations of archaeological research must be considered in the design of conservation projects. Frequently there are conflicts of interest between both disciplines as conservation needs might preclude the possibility of further research or limit the scope of the task, if, for example, an area or

sector is extremely fragile and its excavation is not recommended.

This is also closely influenced by considerations pertaining to the human and financial resources archaeological conservation entails. Unlike excavation projects, conservation never ends. It is a continuous process where maintenance is critical once stabilization has been achieved, to mitigate decay factors and to slow their speed and rate of influence. Such consideration entails sustained investments that are rarely guaranteed for sites, so consequently it influences the level and extent of excavations to be undertaken if conservation is at the core of decision-making.

These difficulties can be overcome when decision-making takes place within a multi- and transdisciplinary context, with precisely defined excavation areas that fit research objectives, and with consideration of existing resources to guarantee the conservation and maintenance of exposed sites. Similarly, there will be progress in site conservation when shared responsibilities in the safeguarding of heritage sites are recognized.

In terms of the conservation of materials, discussions highlighted the following points. Archaeological excavation breaks the balance that materials have achieved during the burial period. Although buried structures and decorative elements may not be in a good state of conservation, it is important to recognize that they have reached a state of stability under these burial conditions. Therefore, excavation is deemed to cause a dramatic period of decay, almost a shock upon exposure, and then the materials continue a gradual process of adaptation, which leads to decay and changes in the materials as they seek a new stabilization in the environment. These effects can be further exacerbated by cultural

factors, including lack of control of visitors, looting and inadequate conservation measures, among others. It is important to underscore that even reburial can bring about decay, as materials will suffer a new “shock” upon reburial that also entails a subsequent adaptation period. However, decay factors are mitigated in as much as environmental and cultural exposure is controlled, and a more stable environment is generated.

Conservation as a field has accomplished significant progress in terms of understanding decay phenomena and the recognition of limitations to holistically and sustainably address conservation challenges. Discussions continue in regard to the role of micro and biological growth, and the use of different materials and techniques for interventions; also there are still gaps in knowledge, for example, for explaining the accelerated rate of decay of certain limestone in the region. To date, important lessons have already been learned concerning the role of poor interventions in subsequent loss or alteration, and this has led to the slow recognition of appropriate and sustainable alternatives. But this has yet to become a clear regional policy, and actions continue to be implemented without taking into account their impact in the short and long term or the impact they have on other factors.

In addition, there are still important limitations in the region with regard to technical capacity, which occurs on several levels, from the technical personnel who carry out interventions to the conservators and directors of sites. The number of trained professionals and technicians is insufficient to address the diversity and magnitude of problems in the Maya area. Training programs and capacity building opportunities are still limited so no substantial improvement on this front is foreseen in the short term.

Another important aspect with significant implications that is only superficially considered in most cases is the impact conservation interventions have on the values of a place. For example, the consolidation of surfaces, notwithstanding the compatibility of the material employed, is still irreversible and alters the possibility of doing scientific analysis later on, but

without this consolidation treatment a decorative element can be lost forever. Therefore, decision-making needs to be an informed process and substantiated by the largest amount of information possible; the need for a multi-disciplinary project cannot be underscored enough. There is no recipe to follow; each case is specific, as each site imbeds different values and characteristics that make it significant and distinctive, and these are the elements that will guide decision-making to define appropriate and effective interventions for each place.

In addition to the discussion on values, conservation as a discipline in the Maya area continues debating the notions of compatibility and reversibility and the selection of interventions according to the adequacy of materials in this respect. There are also important discussions of alternative measures for intervention, such as protective shelters and reburial. Like direct interventions, these options would have to be evaluated taking into account the values of the place and the possibility, according to the specific context, to guarantee their conservation. Participants also highlighted the irreversibility character of all these processes, from excavation to conservation to presentation. Once the physical fabric has been touched or intervened upon, the change is irreversible. Thus panelists called for a precautionary principle in excavating additional sites to open them to the public, thinking about the possibilities that might exist in the future to research, conserve and present heritage sites.

As for site management, methodological approaches and processes were discussed and value-driven initiatives were highlighted. However, notwithstanding the approach, panelists agreed that the only way to secure sustainable conservation was through strengthening the notion of shared responsibilities among different stakeholders and at all levels, from the local to the regional. The mechanism to foster this collective consciousness is to promote processes that encourage broad social inclusion and respect for the values of the social and natural landscapes, including intangible aspects such as traditions, ways of life and know-how, among others.

Another underscored issue was sustainability in the use of archaeological and natural heritage. In this respect, the good use of sites was discussed, particularly as it pertains to the type of tourism that promotes the development of local communities, etc. Panelists highlighted that good use entails the design of alternatives that depend not only on one variable, such as tourism, so that real, tangible and sustainable benefits for local populations and other social sectors can be achieved. The need to establish clear policies for research, conservation and use was also discussed, considering that not all sites can be treated the same way (with reconstructed temples and cleared vegetation). Rather, decisions need to be made according to the values of sites, their context and the specific possibilities for long term conservation and management.

Sustainability was also noted for the design and implementation of strategies and the need to secure financial, material and human resources to guarantee it. The importance of having a continuous investment to generate self-sustainability was also discussed, and panelists gave emphasis to the fact that continuous investment is less costly than specific interventions that occur once a site is abandoned and without maintenance.

It is critical to work on creating and generating capacity building endeavors, not only for professional training but also to include the promotion of know-how and traditional skills. Precise levels of responsibility in decision-making also need to be identified along with obligations and accountability. The need to create alliances and synergies and to take advantage of collaborative opportunities was also pointed out, so that they are used to the maximum, and to avoid duplicity of efforts. In this respect, planning is an essential tool for sectorial integration and for the negotiation and reconciliation of diverse interests and for coordination of resources at the international level. Its importance to articulating decision-making and promoting continuity was also emphasized. However, it was noted that planning is not an end unto itself; it is only a tool for integrated and sustained decision-making.

In addition, the notion of archaeological heritage conservation was examined and considered as an endeavor that goes beyond interventions on the physical fabric to include collaboration with actions for development and others that can directly and indirectly impact the heritage place. Attention needs to be placed on issues such as social fabric and development concerns, among others. As progress is made in this recognition, a larger integration of the conservation agenda with other macro agendas in each country will be achieved, and heritage will contribute in a real and tangible way to the current needs of society, generating an articulation between heritage and society that fosters pride and identity on different levels.

With this in mind, the role that development agencies, banks, foundations and other financial organizations play in decision-making at sites was discussed. The perceived benefits of archaeological sites cannot only be limited to economic ones and pressure to intervene at sites for tourism purposes needs to be halted. It is difficult to maintain high standards in research and conservation if these processes are not understood and continue to be compared to infrastructure development. It is essential to outline the requirements to guarantee an integrated conservation and the safeguarding of the heritage place aside from the potential economic benefits its use could derive.

In the case of the Maya area, other aspects that are worthy of attention at this time include the recovery of traditions, the recognition of the sacredness of places for various cultures that still have ancestral practices at many sites, the respect for human rights and new trends for co-management schemes between authorities and indigenous groups. These challenges require further exploration and will need to be addressed in addition to other issues highlighted before.



# Panel schedule

## XXII Symposium of Archaeological Investigations in Guatemala

Museo Nacional de Arqueología y Etnología de Guatemala

July 21 – 25, 2008

Archaeological sites in the Maya area: a conservation challenge

Tuesday, July 22

<b>9:00 – 10:00</b>	<b><i>Theme 1: Integration of archaeological research and conservation</i></b>
9:00 – 9:20	Conservation alternatives and the Yaxchilán Project during the 1970s <i>Daniel Juárez Cossío</i>
9:20 – 9:40	Issues in the rescue and conservation of El Naranjo <i>Vilma Fialko</i>
9:40 – 10:00	Archaeological and ecological research and conservation in the Mirador Basin, Guatemala <i>Richard D. Hansen, Edgar O. Suyuc-Ley, Enrique Monterroso Tun and Enrique Monterroso Rosado</i>
<b>10:00 – 11:00</b>	<b><i>Theme 2: Conservation of archaeological materials: methodological approaches, interventions and alternative measures (shelters, reburial, etc.)</i></b>
10:00 – 10:20	Making the case for the in situ conservation of the Hieroglyphic Stairway in Copán: Interdisciplinary condition assessment and monitoring over time as a basis for intervention planning <i>Thomas Roby, Eliud Guerra and Rufino Membreño</i>
10:20 – 10:40	The challenge of conserving Tikal, Guatemala <i>Carlos Rudy Larios Villalta</i>
10:40 – 11:00	Investigative tunneling issues in the conservation of World Heritage sites in the Maya region: the cases of Copán and Tikal <i>Seiichi Nakamura</i>
<b>11:00 – 11:20</b>	<b><i>Coffee break</i></b>
<b>11:20 – 12:00</b>	<b><i>Theme 3: Site management: challenges in reconciling values, attaining sustainability and balancing conservation and presentation</i></b>
11:20 – 11:40	Implementation of planning models for heritage management: the case of Joya de Cerén, El Salvador <i>Carolina Castellanos and Françoise Descamps</i>
11:40 - 12:00	Archaeology under the Maya forest canopy <i>Anabel Ford</i>
<b>12:00 – 13:00</b>	<b><i>Discussion panel on key issues:</i></b> Current approaches to site conservation and evaluation of 30 years of experience in the field; balance between research, conservation and public use; balance between heritage conservation and development. <i>Françoise Descamps and Juan Antonio Valdés</i>



# Abstracts

## ***Theme 1: Integration of archaeological research and conservation***

### **Conservation alternatives and the Yaxchilán Project, Mexico, during the 1970s**

***Daniel Juárez Cossío***

The objective of this paper is to present the general approach that guided the activities of the Yaxchilán Project in Chiapas, focusing on the scope of both research and conservation activities, with a special emphasis on the latter. The historical context, in which various archaeological research and conservation programs were developed in Mexico, prior to breakdown of anthropological work at the end of the 1960s, is briefly summarized. This background allows for a better understanding of how the Yaxchilán Project itself was framed, and provides a means by which to examine the criteria followed in the restoration and presentation of the site. Keeping this perspective in mind, the results of the project will be evaluated.

### **Issues in the rescue and conservation of El Naranjo, Guatemala**

***Vilma Fialko***

The ancient Maya city of Naranjo, considered the second largest site in the northeastern Petén region, after Tikal, has been extensively looted in terms of its sculpture, architecture and ceramic artifacts. It is estimated that ninety-five percent of buildings in the site's center and vast periphery have been disturbed. The rescue and documentation of the damage suffered by Naranjo began in 2002, a slow process that faces problems of limited resources for the conservation of exposed architecture and sculptures, and for adequate security. The World Monuments Fund

(WMF) included Naranjo on its Watch List of the 100 Most Endangered Sites in the world, and as part of the process to attain the stabilization of Naranjo, this organization sponsored a feasibility study, the results of which comprise an important component of this paper.

### **Archaeological and ecological research and conservation in the Mirador Basin, Guatemala**

***Richard D. Hansen, Edgar O. Suyuc-Ley, Enrique Monterroso Tun and Enrique Monterroso Rosado***

Since 2001 the Mirador Basin Archaeological Project has worked, jointly with Guatemala's Dirección General del Patrimonio Cultural y Natural, on the conservation and valorization of the Mirador Basin's archaeological sites and natural environment, especially at the site of El Mirador. The project has been innovative in various ways, and the methodology that has been implemented at El Mirador, which optimizes the collection of archaeological information, promotes both cultural and natural conservation, and facilitates visitor understanding of the site, will be discussed. The main efforts of the project have focused on the protection and exhibition of certain architectural remains and architectural art, and have forced the implementation of an appropriate and innovative methodology adapted to the characteristics of each area of the site. One of the overall objectives of the project is collaboration to promote the development of the site for visitors along with the holistic conservation of a complete ecosystem.

**Theme 2:**  
***Conservation of archaeological materials: methodological approaches, interventions and alternative measures (shelters, reburial, etc.)***

**Making the case for the in situ conservation of the Hieroglyphic Stairway in Copán, Honduras: Interdisciplinary condition assessment and monitoring over time as a basis for intervention planning**

*Thomas Roby, Eliud Guerra and Rufino Membréño*

In response to specialists' concern about the loss of surface material from the carved hieroglyphs, and calls for the Hieroglyphic Stairway's removal to a more protected environment in a museum on site, the Getty Conservation Institute and Instituto Hondureño de Antropología e Historia undertook interdisciplinary studies to determine the condition of the Stairway and define appropriate intervention actions to guarantee its conservation. The future conservation of the Stairway depends on the continued existence of a shelter, with some small improvements, to maintain a stable environment. A photographic monitoring program has been instated so that any change in conditions can be quickly reacted to. Together with a protective shelter and monitoring, trained maintenance technicians are needed to repair any new damage that may occur eventually, using lime-based materials rather than synthetic resins, as were used in the past with some poor results. These three measures and a timely replacement of the shelter before it is damaged can ensure the Stairway's conservation in situ.

**The challenge of conserving Tikal, Guatemala**

*Carlos Rudy Larios Villalta*

The conservation of monuments is an enormous challenge across the world, yet none compares to the challenge we face in conserving such sensitive and fragile materials as the Petén limestone used by the Maya in the construction of their great pyramids. Tikal, the most explored and best known site

in the Maya world, being one of the first sites open to tourism, has been like an acceleration chamber in which we can learn and see in a few years the destructive effect of natural and human elements, threatening to leave us with nothing. We believe that the moment has arrived for understanding that the methods used in many restoration projects, far from promoting conservation, are part of the deterioration that today confront the ancient constructions of Tikal and many other similar sites in an irreversible way.

**Investigative tunneling issues in the conservation of World Heritage sites in the Maya region: the cases of Copán, Honduras, and Tikal, Guatemala**

*Seiichi Nakamura*

The problem of conservation at World Heritage sites is a pressing topic and of common interest to all. Nevertheless, it seems that many archaeologists who conduct tunnel excavations are still unaware of this, as a serious conservation problem for Maya sites is indeed the tunnels opened for archaeological research that later collapse for various reasons when no stabilization measures are taken. In Honduras in 1999 the Instituto Hondureño de Antropología e Historia created a conservation program for Copán (PICPAC), which was carried out until 2002 alongside the Getty Conservation Institute's Hieroglyphic Stairway project. Although personnel of the PICPAC project completed several tasks within and around the Copán Archaeological Park, stabilization and consolidation of excavation tunnels was the primary focus of their activities. Based on these experiences, this paper will analyze issues concerning the existing excavation tunnels of Copán as well as Tikal.

### **Theme 3:**

## ***Site management: challenges in reconciling values, attaining sustainability and balancing conservation and presentation***

### **Implementation of planning models for heritage management: the case of Joya de Cerén, El Salvador**

*Carolina Castellanos and Françoise Descamps*

Between 1999 and 2002, the Getty Conservation Institute, in collaboration with El Salvador's Consejo Nacional para la Cultura y el Arte, developed a project for the elaboration of a management plan for Joya de Cerén, a site inscribed on the World Heritage list. This process was undertaken within the framework of the GCI's Maya Initiative, which had a regional focus and was concentrated on the development of methods and processes that promote the holistic conservation of cultural heritage. The objective of this paper is to analyze critical aspects of the participatory planning process, guided by the values that drive the management of sites, as well as the challenges faced when implementing defined plans. It includes a critical introspection of the process in the specific context of Joya de Cerén and the essential themes that have allowed reflection on the limitations and issues of planning and site management in the Maya region.

### **Archaeology under the Maya Forest canopy**

*Anabel Ford*

The Maya forest, once home to the ancient Maya civilization, is now the focus of intense management scrutiny and pressures of growing local needs. Adapting to changing conditions and managing with flexible designs is a crucial requirement to meet both short term and long term development objectives. To accomplish resource conservation and development, innovative management planning with strategic and dynamic designs need to be encouraged. This is precisely what the El Pilar Program has been promoting. Over the past ten years, the El Pilar Program has constructed an interdisciplinary progressive approach for the El Pilar Archaeologi-

cal Reserve for Maya Flora and Fauna. El Pilar is now a new tourism destination with the vision to create new and innovative management designs that are inclusive of the regional qualities and the local traditions of the Maya forest. The aim is to maintain the landscape of the ancient monuments with the forest garden practice.

### **Debate on key issues: Archaeological sites and conservation in the Maya area**

*Françoise Descamps and Juan Antonio Valdés*

The discussion panel is structured as a forum for professional exchange to analyze the three main themes of the conference, both broadly and specifically. To examine the diverse methodological approaches to archaeological site research, conservation and presentation in the Maya area, interventions carried out at archaeological sites and theoretical frameworks promoted at the international level were compared; different approaches to the management of archaeological sites and their application to various contexts were explored; and the diverse circumstances that influence decision-making in research, conservation and site presentation were evaluated. Other specific issues that were discussed include current criteria and approaches that have grown out of thirty years of experience in the field, the balance between research, conservation and presentation, and the balance between heritage conservation and development.



# Author biographies

**Carolina Castellanos** is a cultural heritage consultant working for international organizations such as the GCI, ICCROM, ICOMOS and the UNESCO's World Heritage Center on management planning for heritage sites and policy development for cultural heritage. She is also involved in issues such as statutory reporting for World Heritage sites, the impacts of climate change and management systems for cultural heritage and teaches site management and conservation at regional and international courses.

**Françoise Descamps** joined the GCI in 1997 as senior project specialist. She oversees the Maya Initiative, coordinated a workshop to address the methodology for retablo conservation and leads the GCI's Management Planning project, the development of the scientific program for the World Congress of the Organization of World Heritage Cities, and research for the Historic Cities and Urban Settlements initiative. She has worked in the field of conservation and management in Africa and the Caribbean, for the Belgium Cooperation Agency in the historical city of Quito and for private architectural firms in Belgium and France.

**Vilma Fialko** is an archaeologist and researcher with over 30 years of experience in the study of Maya culture. She currently coordinates the project for the protection of archaeological sites in the Petén, dependent on the Guatemalan Institute of Anthropology and History, and directs the Project "Maya Triangle" focused on the archaeological sites of Nakum, Yaxhá and Naranjo.

**Anabel Ford** is an archaeologist who has worked in the Maya region since 1972. She is the director of the multidisciplinary program of BRASS/El Pilar, a part of the Mesoamerican Research Center at the University of California in Santa Barbara. She has written numerous articles about the Maya and has carried out field work in the Maya forests of Guatemala and Belize as well as additional research in the US and Peru.

**Eliud Guerra** studied at the National School for Fine Arts in Tegucigalpa, Honduras, where he received the title of master in fine arts. In 2001 he took the stone conservation course offered by UNESCO/ICCROM in Venice. From 2000 to 2002 he was part of the Hieroglyphic Stairway Project conducted by Barbara Fash. Since 2003, he has collaborated with the GCI on the conservation project for the Hieroglyphic Stairway. He currently works for the Copán Archaeological Project, PROARCO, as a conservation assistant.

**Daniel Juárez** is an archaeologist with graduate studies in architectural conservation. He is currently a researcher at the Archaeological Heritage Directorate for Research and Conservation in Mexico's National Institute for Anthropology and History. Over the past thirty years, he has led numerous archaeological projects in the Maya area, including at the Yaxchilán and Pomona sites, as well as investigations in the Mexican central highlands.

**C. Rudy Larios Villalta** was trained in archaeology and restoration by the University of Pennsylvania during the Tikal Project. He has consulted for numerous sites in the Maya area on research and conservation issues and has received awards for his works, including the Emmy Prize in New York in 1994 and the Quetzal Order in 2008. He has recently been directing conservation works in Tikal's Temple IV and is preparing master sections of the Copán Acropolis for the upcoming publication by Pennsylvania and Harvard.

**Rufino Membreño** received training on the restoration of archeological materials from IHAH in 1990. He also received additional training on stucco conservation during a training course sponsored by UNESCO. In 2004 he took the conservation course for stone materials delivered in Panama City. Since 1990 he has worked for different projects at the archaeological site of Copán and as of 2001 has worked as assistant restorer for the monuments in Copán. He has collaborated with the GCI since 1999 in the conservation project for the Hieroglyphic Stairway.

**Thomas Roby** is an architectural conservator with the GCI specializing in the conservation of archeological sites, and in particular, stone and mosaics. After finishing his conservation studies at the University of York, UK, and at ICCROM in 1987, he worked privately for more than 15 years based in Rome on site and monument conservation projects in Italy, North Africa and the Middle East. He joined the GCI in 2001 where he has led the mosaic maintenance technician training project in Tunisia, and has been senior conservator on the Hieroglyphic Stairway Project in Copán, Honduras.





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