

THE PRESERVATION QUARTERLY OF THE WORLD MONUMENTS FUND

WORLD MONUMENTS

WINTER 2006/2007
\$4.95

Visions of Heaven and Hell

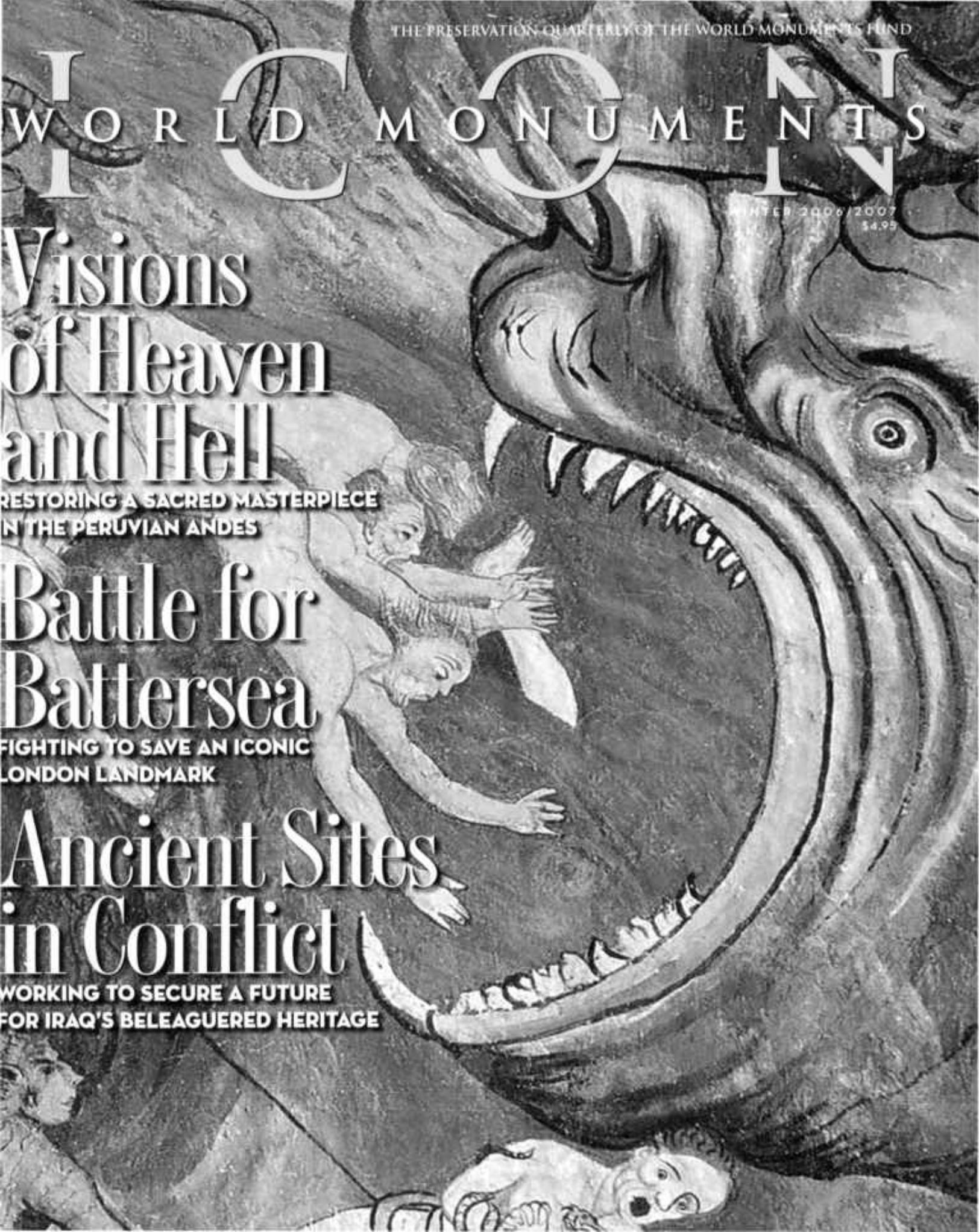
RESTORING A SACRED MASTERPIECE
IN THE PERUVIAN ANDES

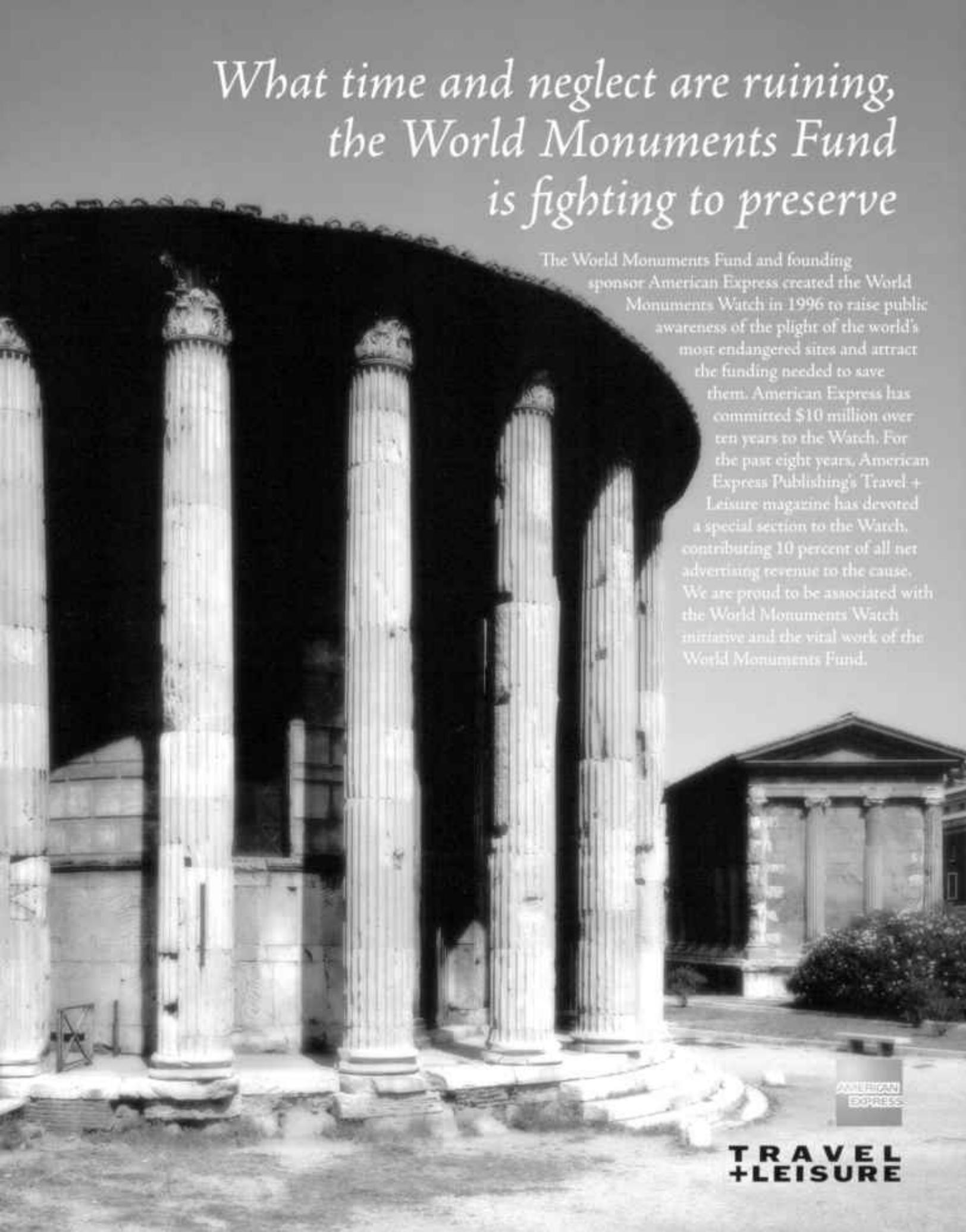
Battle for Battersea

FIGHTING TO SAVE AN ICONIC
LONDON LANDMARK

Ancient Sites in Conflict

WORKING TO SECURE A FUTURE
FOR IRAQ'S BELEAGUERED HERITAGE





*What time and neglect are ruining,
the World Monuments Fund
is fighting to preserve*

The World Monuments Fund and founding sponsor American Express created the World Monuments Watch in 1996 to raise public awareness of the plight of the world's most endangered sites and attract the funding needed to save them. American Express has committed \$10 million over ten years to the Watch. For the past eight years, American Express Publishing's *Travel + Leisure* magazine has devoted a special section to the Watch, contributing 10 percent of all net advertising revenue to the cause. We are proud to be associated with the World Monuments Watch initiative and the vital work of the World Monuments Fund.

AMERICAN
EXPRESS

**TRAVEL
+LEISURE**

ICON

WORLD MONUMENTS

ICON is funded in part through the generosity of the Brown Foundation, Inc. of Houston, the Paul Mellon Education Fund, and Paul Beirne

FEATURES

10

Iraq's Beleaguered Heritage

WMF and the Getty Conservation Institute remain committed to aiding their Iraqi colleagues

12

St George's Hall, Liverpool

A neoclassical icon will soon shine again

16

Visions of Heaven and Hell

Restoring an extraordinary mural cycle in the Peruvian Andes

24

Battle for Battersea

The saga of the London landmark continues

28

Rebuilding the Building Arts

Ensuring a future for the field of preservation

34

Between a Rock and a Hard Place

The fate of Australia's Dampier Rock Art Site hangs in the balance

38

Saving Segovia's Aqueduct

Politics are set aside to preserve a Spanish landmark

DEPARTMENTS

- 2 From the President
- 5 From the Editor
- 6 Inside WMF
- 8 Preservation News
- 42 The Art of Preservation
- 44 WMF Insider's Guide
- 46 Ex Libris
- 48 Expedition: Croatia

ON THE COVER

El infierno (Hell) as depicted in a mural painted by Tadeo Escalante in 1802 within the Church of San Juan Bautista, Huaró, Peru. Photo by Ruperto Márquez

Founded in 1965, the World Monuments Fund is dedicated to the preservation of imperiled works of art and architecture worldwide through fieldwork, advocacy, grantmaking, education, and training. A New York-based organization, WMF has affiliates and offices in France, Italy, Portugal, Spain, and the United Kingdom.



A CONSERVATOR CAREFULLY TOUCHES PAINT ON A CHURCH MURAL IN HUARO, PERU

Power of Community Pride

HARNESSING LOCAL SUPPORT FOR PRESERVATION MAKES ALL THE DIFFERENCE

A number of articles in this issue reveal fierce community emotions coming to play in relation to landmarks that are locally important but have nevertheless come to the brink of loss. In each case, WMF's efforts have been decisive in bringing them into wider recognition. A community in highland Peru, once prone to deface murals within its church because of their colonialist content, has now adopted these brilliant, if terrifying, images as a motif for a new local crafts industry, and found an unforeseen economic resource. Aboriginals in Australia, outraged at the thought that prehistoric drawings made by their ancestors would be sliced off their rock supports, have finally spoken out against their desecration after years of silence. Local and national authorities in Spain are joining forces to counter the deterioration and prior botched treatment of the famed Roman aqueduct in Segovia. And in London, heritage officials are accused of being duped into supporting a redevelopment plan for the Battersea Power Station, which may at best have been a temporizing scheme that allowed the property developer to walk away from the site with a huge profit resulting from its enhanced real estate value having made no investment in the site's conservation.

Awakening local pride is a powerful force that preservationists can harness to save important structures. In communities previously unaware of the value of their monuments, indifference can be converted to pride when they realize that the outside world admires and cares about their local landmarks.

The renovation of the small concert hall that is part of St. George's Hall in Liverpool is a particularly impressive story. WMF first became aware of the building and its importance in 1990, when the Prince of Wales—upon receipt of the WMF's prestigious Hadrian Award—asked our organization to help preserve this building before any other in England. At that time, it seemed an impossible task. A neoclassical marvel, the enormous building was considered a white elephant in the heart of a declining section of the city's downtown. The renovation cost—some £23 million—seemed out of range when proposals for reuse projected only the most modest revenue. But the city's cultural officials, who believed in the project and in the city's importance, were able to make their case to Prince Charles—and hence to WMF.

And next year, when Liverpool is declared Europe's cultural capital, the rededication of the wonderful concert hall will mark WMF's small but important gesture toward making what once seemed an unimaginable vision a reality.

No building is so large that it cannot be saved through the force of local confidence and imperative, and no degree of neglect is so great that we should turn our backs on the buildings that have been and can again be symbols of local pride. They can become symbols of local growth, as the cases around the world in this issue illustrate.



CELEBRATIONS IN FRONT OF SAN JUAN BAPTISTA IN HUARO, PERU, MARK THE COMPLETION OF THE RESTORATION OF THE CHURCH'S EXTRAORDINARY MURALS, PAINTED AT THE DAWN OF THE NINETEENTH CENTURY.

Bonnie Burnham

Bonnie Burnham
PRESIDENT

What is space?

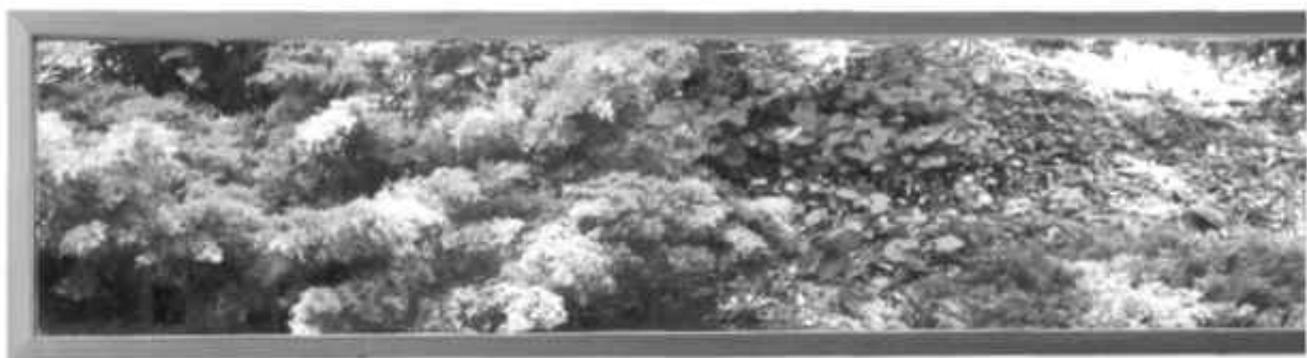
It's bigger than just a room.

Space creeps out into the hallway.

Space sprawls out on the patio.

It's your home without dividing lines.

Make the most of your space
at knollspace.com



Eero Saarinen Dining Table and Chairs.
For timeless designs, visit knollspace.com or call 866-94-KNOLL for the retailer nearest you.

Knoll



We've redefined the meaning of taste. Experience a truly unique feeling with THAI. Fly THAI - Smooth as Silk.

For Reservations call
800-426-5204

 **THAI**

 A-STAR ALLIANCE MEMBER

Keeping Score on the Preservation Front

With more than 100 active projects in its current operating portfolio, WMF could easily rest on its laurels, proud of the extraordinary progress that is being made to save world treasures such as Angkor in Cambodia, the Lodge of Retirement in China's Forbidden City, Catherine the Great's Chinese Palace at Oranienbaum in Russia, and monuments of pharaonic age on the West Bank of the Nile in Egypt. Yet the organization rarely finds itself engaged in acts of self adulation, but rather in an unrelenting dialog with partners around the globe to rescue sites that may soon be lost to war, natural disaster, or redevelopment.



THE FUTURE OF LONDON'S ICONIC BATTERSEA POWER STATION, A 2006 WMF WATCH SITE, REMAINS UNCERTAIN.

This issue we highlight two such sites—the Dampier Rock Art Site on the northwest coast of Australia (see page 34), a portion of which has already yielded to industrial development, and London's iconic Battersea Power Station (see page 24), which may soon face partial if not complete demolition. We have also taken the opportunity to update you on WMF's continuing efforts to enhance the capacity of Iraq's antiquities staff to care for what is left of their country's cultural patrimony once hostilities cease.

While our gains over the past four decades clearly outnumber our losses, WMF will only rest easy when all of the sites in our purview are well out of danger.

This issue, we have introduced a new column, the *Art of Preservation*, penned by ICON contributing editor Eve M. Kahn. Each issue she will be examining some of the innovative new technologies that are entering the preservation toolkit and the pioneering minds behind them. As each new development comes on line, conservators will be better able to assess a site's condition and find appropriate treatment.

Angela M.H. Schuster
EDITOR

Contributors

VICTORIA LAURIE, a senior writer for *The Australian*, covers heritage issues for the newspaper's Western Australian bureau.

A graduate in the History of Art from Bristol University, **KATHERINE BOYLE** is a projects assistant for WMF in Britain.

JEREMÍAS GAMBOA, a writer and art critic contributes to the Peruvian magazines *Debate* and *Somos*, and is the chief press officer for the country's National Institute of Culture. **RUPERTO MÁRQUEZ** is a Cuzco-based photographer who has worked extensively for National Institute of Culture.

EDITOR

Angela M.H. Schuster

ART DIRECTOR

Ken Feisel

CONTRIBUTING EDITORS

- Colin Amery
- Norma Barbacci
- Michelle Beranfeld
- Will Black
- Morris Hylton III
- Eve M. Kahn
- Leila Hadley Luce
- Holly MacCammon
- Henry Tzu Ng
- John Julius, Viscount Norwich
- Gaetano Palumbo
- Eric Powell
- Andrew Solomon
- Gavin Stamp
- Anthony M. Tung
- Mark Weber

**WORLD MONUMENTS FUND
BOARD OF TRUSTEES**

HONORARY CHAIRMAN

John Julius, Viscount Norwich

OFFICERS

- Dr. Marilyn Perry, Chairman
- The Honorable Ronald S. Lauder,
Vice Chairman
- H. Peter Stern, Vice Chairman
- Robert W. Wilson,
Vice Chairman and Treasurer
- Robert J. Gemiesse,
Secretary & General Counsel

PRESIDENT

Bonnie Burnham

TRUSTEES

- Prince Aynn Aga Khan
- Paul Beirne
- Brook Berling
- Kevin R. Brine
- The Honorable W.L. Lyons Brown
- Peter W. Davidson
- Mica Erhegin
- Ashton Hawkins
- Roberto Hernández Ramirez
- Peter Kimmelman
- Nina Joukowsky Köprülü
- Steven Kossak
- Dr. Lois de Menil
- Samuel C. Miller
- Christopher Ohstrom
- Sharon Patrick
- Bernard Selz
- Peter M.F. Sichel
- Andrew Solomon
- Peter Stormonth Darling
- Nicholas Thaw

PROJECT COMPLETED

The Rebirth of Chamba Lhakhang: A Himalayan Jewel in Ladakh

A puja, or ceremony of devotion, was held on October 4, heralding the completion of the restoration of one of Ladakh's most important Buddhist temples, the Chamba Lhakhang, built between 1445 and 1550 within the fortified monastery at Basgo and included on WMF's 2000 list of 100 Most Endangered Sites (see *ICON* Summer 2006). Within the Chamba Lhakhang is an extraordinary mural cycle painted during the late sixteenth-century reign of King Tsewang Namgyal, which depicts manifestations of the Buddha, important deities and rinpoches, or Buddhist teachers, as well as scenes from the life of king and his court. Until recently, however, the Chamba Lhakhang was in an advanced state of decay with a failing roof, structural cracks, crumbling mud plaster, and delaminating murals—damage wrought in large part by the erosion of the hill upon which the temple was built. Shortly after Watch listing, WMF's corporate sponsor American Express stepped forward with a grant to underwrite emergency repairs. Funds for a full



restoration of the sanctuary were later complemented by WMF through its Robert W. Wilson Challenge to Conserve Our Heritage. —AMHS

Natural
Stone
2006 Awards



THE
GEORGIAN
GROUP

WMF CITED FOR EXCELLENCE IN PRESERVATION Prize for St. George's, Bloomsbury

The restoration of Nicholas Hawksmoor's London masterpiece, St. George's, Bloomsbury, has been scooping up accolades from the preservation community recently. In early November, the church accepted the Georgian Group's 2006 Architectural Award for Restoration of a Georgian Church and later that month, sculptor Tim Crawley was presented with a Natural Stone Award for his execution of the lions and unicorns that now encircle the base of the church's steeple. The \$15.6 million restoration of St. George's, which began shortly after the sanctuary appeared on WMF's 2002 list of 100 Most Endangered Sites, has been underwritten in large part by the Estate of Paul Mellon, WMF through its Robert W. Wilson Challenge to Conserve Our Heritage, and Britain's Heritage Lottery Fund.

2004 WATCH SITE RESTORATION HIGHLIGHTED Shaxi Village Subject of Swiss Exhibition

For nearly a decade, Shaxi, a rare and wonderful Ming Dynasty (1368-1644) market town located in Jianchuan County in the Himalayan foothills, has been the subject of an extraordinary restoration campaign carried out by a Swiss-Chinese conservation team with support from WMF through its Robert W. Wilson Challenge to Conserve Our Heritage (see *ICON*, Summer 2004). Now, an exhibition chronicling the rehabilitation of the town—which served as a critical waystation on the tea and horse caravan trail from Yunnan to Tibet for more than two centuries—is on view at the Kornhausforum in Bern, Switzerland, through March 5.



For information on the exhibition contact Jacques Feiner, project manager for the Shaxi Rehabilitation project, at feiner@nsl.ethz.ch or visit the project website at www.nsl.ethz.ch:16080/irl/shaxi/index.htm

UPCOMING LECTURE SERIES

WORLD MONUMENTS *Touchstones of Past and Present*

presented by
WORLD MONUMENTS FUND
and

THE METROPOLITAN MUSEUM OF ART

Great monuments endure because they embody the quintessential political, cultural, and historical fabric of their times. In this annual series presented by the World Monuments Fund in cooperation with The Metropolitan Museum of Art, experts discuss the meaning of iconic touchstones within their cultural context and today's efforts to ensure their survival.

Tuesday, April 24 • 8:00 P.M.

Building with History: How the Old and the New Can Co-exist In the Modern World

Norman Foster is Senior Partner and Chairman of Foster + Partners, a leading architecture firm in the United Kingdom.

Tuesday, May 1 • 8:00 P.M.

The Architecture of Happiness: How our Surroundings Affect Our Emotional Well-Being

Alain de Botton is the author of eight books, including *The Architecture of Happiness*, and a regular contributor to National Public Radio and *The New York Times*.



Tuesday, May 8 • 8:00 P.M.

Saving Venice: The Challenges of Preserving One of the World's Most Treasured Cities

John Julius Norwich, author of numerous books, including the recently released *The Middle Sea: A History of the Mediterranean*, is one of the world's foremost authorities on Venice and Honorary Chairman of WMF.

THE METROPOLITAN MUSEUM OF ART
Fifth Avenue at 82nd Street, New York City

\$60 for the series of three lectures, \$22 for single tickets.

To order tickets call the Met Box Office at 212-570-3949;
Monday through Saturday, 9:30 A.M.-5:00 P.M.
Visit www.wmf.org for additional information.

WORLD MONUMENTS FUND



MEMBER TRIP TO CHINA

October 20-31, 2007



Ancient, Imperial and Modern China

*An Exploration of China's Cultural
Heritage Across the Millennia*

This eleven-day trip to Beijing, Xi'an, Hangzhou and Shanghai will visit some of the country's most significant historical sites and explore the challenges confronting China's great cultural heritage, including WMF-only access to closed areas of the Forbidden City.

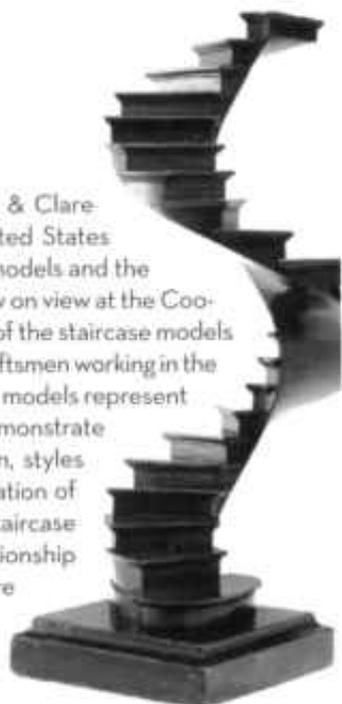
Visit www.wmf.org or call 646-424-9594, ext. 247,
for more information.



SHOWCASING CRAFTSMANSHIP

Masterpieces in Miniature Take New York

Made to Scale: Staircase Masterpieces—The Eugene & Clare Thaw Gift,” the first museum exhibition in the United States focused on an extraordinary collection of staircase models and the largest known holding of these works outside of France, is now on view at the Cooper-Hewitt National Design Museum in New York. A majority of the staircase models are from nineteenth-century France and were produced by craftsmen working in the meritocratic system known as *compagnonnage*. The staircase models represent exercises in technical virtuosity used by apprentices to demonstrate their knowledge of cantilevering, balance, forms of rotation, styles of balusters, and other architectural details. In their combination of design and structural, architectural, and cabinetry skills, the staircase models and accompanying drawings demonstrate the relationship between formal training, modeling, and technical mastery. More than two dozen staircase models, a selection of technical elevation drawings, and related illustrated instructional manuals will be on view through June 3, 2007.



ADAPTIVE REUSE SCHEME

A 1,000-Year-Old Hospital in Siena Becomes a New Museum

Founded in the ninth century in the heart of Siena, Italy, Santa Maria della Scala was one of the first hospitals in Europe, dedicated to caring for pilgrims, assisting the poor, and providing for abandoned children. The enormous hospital complex houses a number of fresco cycles painted between the thirteenth and eighteenth centuries, which are currently under restoration. Having fallen out of use as a healthcare facility, the building is undergoing a dramatic rebirth—its underground chambers have been converted into an archaeological museum while newly rehabilitated upper levels are now being used to showcase modern works of art. For more information, see www.santamariadellascala.com.



UNCONTROLLED DEVELOPMENT

The Specter of a Soaring Spire Looms over St. Petersburg

St. Petersburg, Russia—a city whose architectural harmony has long been ensured thanks to a ruling that no building may be constructed over 24 meters—may lose its unique character if plans go forward for the proposed new office for Gazprom, the country's leading gas supplier. The winning proposal by British architects RMJM for “Gazprom-City,” the energy giant's new head office on the banks of the Neva River, calls for a 396-meter-high tower, which is to stand opposite Bartolomeo Rastrelli's mid-eighteenth-century Smolny Cathedral, one of the city's major architectural landmarks.

Norman Foster, Kisho Kurokawa, and

Rafael Vinoly walked off the jury that chose the RMJM design. Kurokawa stated his reasons for leaving the jury were his objections to all six of the short-listed projects and their height because he believes St. Petersburg should preserve its low-rise cityscape, a view shared by Mikhail Piotrovsky, Director of the State Hermitage and Alexander Margolis, head of the Fund for Saving St. Petersburg, as well as a majority of residents who have voted against the Gazprom proposals. Some have noted that construction of this tower will contradict the “Saint-Petersburg Strategy for Cultural Heritage Preservation” and threaten the city's World Heritage status. Recently, UNESCO voiced its concerns over the project and its impact on the historic fabric of the city, where WMF has carried out a number of important restorations in recent years, including the late eighteenth-century Alexander Palace (see *ICON* Spring 2003).

While no objection need be brought against a new building for the city in principle, its main attraction is its unbroken historic skyline, and to date most new buildings in the center have at least respected this. Moreover, the outskirts of the city are rich with potential locations for such visionary new buildings.

Unfortunately, this battle is not a new one, having confronted many historic cities in recent years.

MONUMENTAL RESCUE

Saving Mont-Saint-Michel

The mud flats that isolate Mont-Saint-Michel from the French coast have protected the granite fortress-monastery from invaders for a millennium. But tourists and environmental degradation in recent years have threatened to practically land-lock the site. A nearby river dam has slowed currents into the bay and caused silt buildup, and in summer, cars and buses overwhelm the narrow paved causeway. The French government has been researching solutions to the problems for a decade, and last summer it began implementing a €165 million landscape overhaul.

A new dam, under construction on the Couesnon river, will have sluices that can be opened to flush silt away from the monastery. Eight kilometers of riverbed will



be deepened, and some five million cubic meters of limestone-sand sediment dug out—the government will donate the dirt to local landowners for fertilizer and landfill. The causeway will be razed and replaced with an oak-floored footbridge on metal

stilts. Cars (except for emergency vehicles) will not be allowed to approach the island; on the mainland, new grassy parking lots will be shaded by poplar and oak trees and surrounded by restored salt marshes.

Funding for the six-year effort has come from state and local governments as well as the EU. "Our project budget is not huge, certainly not compared to the €800 million that will be spent on Versailles, but we have to protect this idyllic view," notes Claire Montémont, a spokesperson for the *Projet Mont-Saint-Michel*, an

umbrella group of government agencies. The remote monastery, she adds, attracts 3.2 million visitors a year, more than any other French destination except Paris. For construction updates, see www.projet-montsaintmichel.fr. —EVE M. KAHN

MONUMENTAL MAKEOVER

Britain's Famed Canterbury Cathedral Slated for Restoration

Canterbury cathedral is falling down." *The Guardian* pessimistically announced last fall, but the ca. A.D. 1100 church's prognosis is not quite so dire. "There have been good stewards here, but sections of the building are getting very near the ends of their lifespans," explains Brigadier David Innes, the cathedral's chief executive of development. "And we're coping with the wear and tear of over a million visitors a year." He's now orchestrating a £50 million fundraising campaign to stabilize, repair, and clean the elaborately carved stone skin and trio of towers, wood-framed lead roofing, and a stained-glass collection that includes the world's oldest glazed oculus window (it depicts Moses ringed by prophets).

About £6 million has been raised, and work has already begun on one transept and a domed rear chapel built as a shrine to Thomas Beckett (who was assassinated

at Canterbury in 1170). The building, Innes reports, "will be scaffolded in sections, never completely covered, and never closed to the public. We'll be jacking up the roof piece by piece, replacing rotted parts of the wood frame, and smelting down the lead to re-cast new plates." In-house masonry and stained-glass restorers will re-carve eroded tracery or buttresses and cleanse windowpanes with daubs of moist cotton balls.

The World Monuments Fund in Britain plans to help the cathedral attract international donations over the next few years. (American benefactors can already give



through www.canterbury-cathedral.org.) "It's such an important building, we'll be keeping a close eye on it, and assisting them however we can," says Katherine Boyle, projects assistant for the WMF in Britain. —EVE M. KAHN



SECURING A FUTURE FOR IRAQ'S BELEAGUERED HERITAGE

It has been three years since WMF and the Getty Conservation Institute launched a joint initiative to enhance the capacity of Iraq's heritage professionals to salvage their sites in the wake of war. With no end to the violence in sight, WMF and GCI remain committed to their cause.

by NEVILLE AGNEW, DAVID MYERS, and GAETANO PALUMBO

Ugly things happen in war. In the midst of the nightmare of violence that is Iraq, other tragedies are continuing—ones that are largely unknown to the general public. Destruction of archaeological and cultural sites, of monuments and antiquities is continuing at a furious pace. Weighed in the balance against the toll of death that is visited daily on the people of Iraq, does this matter much? Should it matter? Between oil and antiquities, Iraq's two vast underground resources, it's the antiquities that presumably provide some benefit to poor, otherwise destitute people. Even some archaeologists have publicly stated—as at the Fifth World Archaeological Congress in June 2003—that digging their own past for sale is a right of the poor, though it's widely acknowledged that those who do the digging may receive a pittance. Let us not blame the looters; their trade is after all ancient. Think of the pharaonic tombs—King Tut's was one of the very few lucky ones to have survived their attentions—and looting is active today in many countries, even wealthy, developed ones like Italy.

So, can anything be done to limit looting in Iraq? The answer, obviously, is not much in present times when, it is reported, many of the State Board of Antiquities and Heritage (SBAH) professional staff work half-time or less, with meager resources, unlike the looting gangs who are well-equipped and armed.

Looting apart, threats to the archaeological resources of Iraq also come from the lack of maintenance and conservation of these sites, an impossible task in the present circumstances, given security operations that involve earth-moving equipment, uncontrolled construction, and future development projects that will certainly affect the landscape of the country once security improves.

Today, as the agony of Iraq continues to unfold and deepen, the preservation of cultural heritage may seem a lost cause. Only recently, the chairman of the SBAH, Donny George, fled to Damascus, fearing for the safety of his family. Furthermore, professionals

around the world have expressed concern about the fate of pre-Islamic sites, which have been rumored to be of little interest to the new heritage leadership. In this context, it would seem less and less likely that the Getty Conservation Institute-WMF Iraq initiative could actually be able to work in the country in safety.

So what is to be the fate of this effort? How should GCI and the WMF respond to a situation that seemingly has slid into hopelessness? Should our organizations declare the effort a lost cause and our investment in training the Iraqis and development of a national database/GIS (Geographic Information System) of archaeological sites and monuments a write off?

These were among the questions our organizations discussed in November 2006, at a meeting in New York. As it turned out, the questions were rhetorical—there was unanimity in the decision to continue the commitment to Iraq. For despite the bleak circumstances, we realized that there was still a lot we could do given the resources we had already gathered.

FACING PAGE, INSTRUCTORS AND SBAH STAFF DISCUSS THE DOCUMENTATION OF HISTORIC HOUSES IN THE OLD CITY OF SALT, JORDAN; BELOW, WILLIAM BLAKE, OF THE ENGLISH HERITAGE METRIC SURVEY TEAM, INSTRUCTS SBAH SURVEYORS IN THE USE OF A NEW TOTAL STATION PROVIDED BY THE PROJECT.



First—and of critical importance—we still had the promised support of the Jordan's Department of Antiquities, which since the beginning of the project has unstintingly provided assistance in training courses for Iraqis undertaken in Amman. This will continue through 2007, but with greater participation planned from the Jordanians, who have offered the services of their department's staff to teach some of the courses for the SBAH staff, while having their own staff attend some workshops as trainees. In other words, the Jordanian Department of Antiquities will be partnering with GCI/WMF to both support training courses, and benefit from them.

Second, the national database/GIS of archaeological sites and monuments under development for Iraq is planned to be reconfigured as a web-based system, since for the time being, locating the system in Baghdad is out of the question. A customized and enhanced version of the database/GIS will be developed for Jordan as well, which will replace the existing JADIS (Jordan Archaeological Database Information System) database. Over time, archaeological site data for the whole region will be migrated over to the new system.

Third, the new chairman of the SBAH, Abbas al-Hussainy, is now working with GCI and WMF to draft a new memorandum of understanding. He has declared that his priorities are staff training and the protection of sites through the deployment of a special police force and, with better security in place, to survey and document areas and start compiling a comprehensive archaeological map of Iraq. In addition, WMF and the SBAH have embarked on the development of a management plan for the protection of the ancient site of Babylon, which is to be put in place when conditions permit. The site was adversely impacted by excessive development and restorations under the previous regime, and by the Polish and American military base on the site between 2003 and 2005.

These developments provide exciting opportunities to not only maintain momentum in the Iraq initiative, but to expand our collaborative efforts with Jordan. When the dire situation in Iraq finally stabilizes, we will be poised to provide more direct and hands-on assistance. The database/GIS when deployed will be an essential tool for mapping the location and recording the condition of archaeological and other heritage sites. In the case of looted sites, the system will at least enable a new benchmark of conditions to be established.

In the three years since the GCI/WMF launched its Iraq initiative, good progress has been made. Relationships have developed through personal interaction with the dedicated SBAH staff, many of whom are deeply appreciative of our efforts, having been isolated for decades without recognition or resources. The initiative has also been fortunate, not only in its partnership with Jordanian authorities, but in its training consultants as well, several of whom are expatriate Iraqis, living in Amman, Canada, and the Netherlands. UNESCO, too, has consistently supported the work of the initiative, and has indicated a commitment to continue doing so through the Amman office. We have every hope, therefore, of ultimate success in bringing Iraqi heritage professionals back into the international mainstream, and remain committed to providing the training and tools that will eventually be needed. The GCI and the WMF are doing this despite the bleak situation in Iraq because we resolutely believe it is the right thing to do. ■



Described by the architectural historian Sir Nikolaus Pevsner as the greatest neoclassical building in the world, St. George's Hall in Liverpool, England, had been a source of civic pride since its construction in the mid-nineteenth century, housing the city's law courts, along with a town hall and concert room. Yet, by the close of the twentieth century, it had fallen into decay, a process that accelerated following a moving of the law courts to an alternative venue in 1984.

Upon receiving WMF's Hadrian Award in 1990, HRH Prince of Wales drew attention to the plight of the building in his acceptance speech, in which he outlined an ambitious plan for the complete overhaul of the hall, which would cost an estimated £23 million. In doing so, the prince hoped to enlist WMF's support for the project.

St George's Hall, Liverpool

AFTER A DECADE OF RESTORATION, A NEOCLASSICAL ICON WILL SHINE AGAIN AS THE CITY MARKS ITS 800TH ANNIVERSARY THIS SPRING.

At that time, funding such as restoration seemed far beyond the means of the organization. Nonetheless, WMF pledged its support, choosing the Small Concert Room as a focus for its fundraising efforts and their first British project. WMF in Britain was instrumental in raising funds for the project, while \$500,000 from the Robert W. Wilson Challenge to Conserve Our Heritage encouraged more than £200,000 in matching funds donated by trustees of the St. George's Hall Charitable Trust. Many other donations from trusts and foundations were received through WMF in Britain, including £150,000 from the Esmee Fairbairn Foundation, and grants from the Hemby Trust, BBC Radio Merseyside, The Holt Trust, Aon Company, and PKE Lighting among others. These in turn were substantially augmented by support from the Heritage Lottery Fund and the Liverpool City Council.

Built at a time of mercantile prosperity in Britain, St George's Hall was designed by Harvey Lonsdale Elmes (1814-1847) who was appointed architect in 1840 following his winning of a design competition for the hall. In 1841 the foundations were laid and exterior walls began to rise. Unfortunately, Elmes died in 1847 when the building was only half finished. The Town Surveyor continued building until 1851, when Charles Robert Cockerell (1788-1863) was appointed architect and charged with completing the construction. The Law Courts opened in 1851, followed by the Great Hall in 1854, and in 1855 the Small Concert Room and the rest of the building were completed. Construction of the entire building cost £300,000.

In designing the Small Concert Room, Elmes took his cues from the Calidarium of the Baths of Caracalla in Rome, while

by KATHERINE BOYLE





OPENING SPREAD: THE ORIGINAL COLOR SCHEME OF THE CONCERT HALL HAS BEEN RESTORED AND ITS DAZZLING CHANDELIER IS NOW BACK IN PLACE, FOLLOWING MAJOR REPAIRS. THIS PAGE TOP, ABOVE, THE BRIGHTER COLORS WHICH WERE USED TO REPAINT THE CONCERT HALL DURING AN EARLIER RESTORATION, THE NORTH ENTRANCE HALL, TOP RIGHT, FOLLOWING REFURBISHMENT.

Cockerell was responsible for the interior decoration. Described as the most beautiful interior of the Early Victorian period, it is the finest interior of Cockerell's career. The concert room, which measures 22 by 24 meters, can seat 1,100 people and accommodate an orchestra of 60. With its excellent acoustics, it is considered one of the choice concert rooms in Europe. The Liverpool Culture Company and the Royal Liverpool Philharmonic Orchestra are discussing ways to ensure the successful long-term future of the space.

The architects Purcell Miller Tritton carried out the extensive refurbishment of the space necessary to bring the structure up to code. Prior to restoration, people with impaired mobility had no access to the upper floors of the concert room. Work began with the re-leveling of exterior paving to overcome stepped access, and new ramps and handrails were installed. The original bench seating had been replaced with theater tip-up seats during the 1940s, which had become

worn and dilapidated. These have been repaired, and new loose seating has also been designed—modern-style chairs covered in the same fabric as the fixed seats. These can be loaded onto trolleys and stored away when not in use. Air conditioning and cabling for audio visual equipment have also been installed.

During historical research into the decorative scheme, Jane Davies Conservation discovered that the room has been re-decorated on at least four, if not five, different occasions—the last in the 1980s—and altered considerably from Cockerell's original design. Alterations to the scheme had introduced a blue paint in the ceiling panels, which was brighter and "less green" than the original color, while the off-white used for picking out the ornamentation had been replaced with a stark white.

Among the highlights of the project was the restoration of the chandelier, which weighs more than 750 kilograms. Created by the glass firm Osler of Birmingham, the chandelier was in poor condition and had been crudely converted to electrical power. After a generous grant from Swarovski Crystal, it was carefully dismantled and transported to the Wilkinson glass workshop in London, where all the parts were sorted and repaired, and new glass was cut as appropriate. The crude electrical wiring was removed and replaced with a low-voltage scheme based on the arrangement of the earlier gas jets. Now back in its original position, the chandelier's 2,824 crystal pieces are glittering once more and provide a beautiful focal point for the room.

As Liverpool celebrates its 800th birthday, events and ceremonies to commemorate the completion of the project are planned for April 23rd—St. George's Day. This civic icon has been restored in time for the city to claim its title of the European Capital of Culture 2008. Moreover, the project is spurring further regeneration of the area known as the Cultural Quarter, which is expected to see an investment of £120 million by 2009. ■

THE CLASSICAL GRANDEUR OF ST. GEORGE'S HALL, BELOW, OUTSIDE AND IN, HAS MADE IT A LIVERPOOL LANDMARK. LEFT, A PAINTER RESTORES THE HALL'S CEILING PANELS TO THEIR ORIGINAL COLORS.



The year was 1973 and art historian Pablo Macera had heard from an artisan, Hilario Mendivil, about the existence of extraordinary mural paintings within a suite of churches south of the ancient Inca capital of Cuzco. Following up on the tip, he embarked on a journey to see them first hand. So impressed was Macera by what he saw that on his return to Lima he implored his friend, book publisher Carlos Milla Batres, to join him on another visit to

explore the possibility of publishing a book on these fantastic but little known works of Andean colonial art.

Of his visit to the first of the churches, in the town of Andahuaylillas, Milla would later write in the prologue to *La pintura mural andina siglos XVI-XIX (Andean Mural Painting from the Sixteenth through the Nineteenth Centuries)*, "I could not shake off the sense of awe that took hold of me while contemplating these astounding works of art... We hadn't even gone through half of the church, yet we were spellbound. My friend Macera said to me with that inimitable smile of his: What do you think of all this? I didn't really know how to answer. I said, Pablo, I swear to you on my honor that

VISIONS OF HEAVEN AND HELL

RESTORING AN EXTRAORDINARY MURAL CYCLE IN THE PERUVIAN ANDES

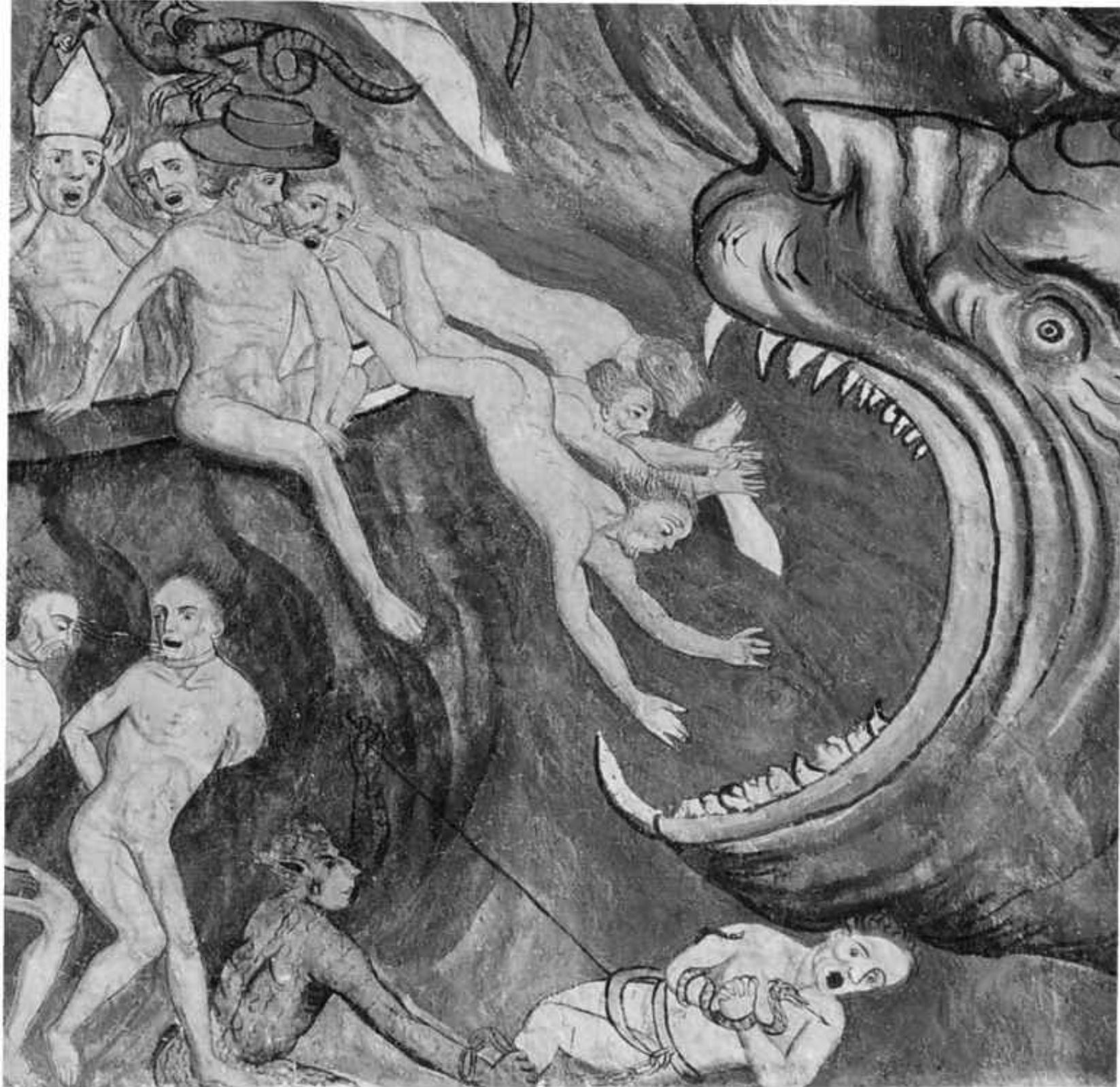
by JEREMÍAS GAMBOA
photography by RUPERTO MÁRQUEZ

I will create a great book about these extraordinary murals. He responded. But, you have yet to see Huaru..." Of his visit there, Milla wrote, "I was gripped with emotion, unable to find words to express my great sense of wonder."

Despite the importance of the murals and Milla's seminal publication on these works of art—executed in large part by the Mestizo painter Tadeo Escalante at the dawn of the nineteenth century—they would remain largely unknown to the outside world. That is until now. Today, the main doors of the Church of San Juan Bautista at Huaru, some 40 kilometers south of Cuzco, open quite effortlessly, revealing a stunning artistic program, recently restored through the efforts of the World Monuments Fund and Peru's National Institute of Culture (INC).

It is a sunny July afternoon and I have come to see for myself what so impressed Milla and Macera





more than three decades ago. As I enter the sanctuary, restorers from the INC in Cuzco have moved all the sculptures in the sanctuary and opened all the windows and doors so that we could get a clear view of this artistic miracle—1,371 square meters of mural painted by various artists, including Escalante. “We launched this program in 2004,” says Ada Estrada, coordinator of the restoration work for the Huaru project. Eight skilled technicians, who have spent the past two years working by her side each day from 7:00 in the morning until 2:45 in the afternoon, smiled with satisfaction. “The work on the murals and altarpieces has been completed. We will now be focusing on sculptures and paintings for the next year.”

Walking through this church is like embarking on a voyage through the minds of the people who inhabited the Andean region in the seventeenth and eighteenth centuries. Upon merely entering the

A DETAIL OF EL INFIERNO (HELL) THAT GRACES THE SANCTUARY OF SAN JUAN BAUTISTA IN HUARO, PERU. NOTE THE PRESENCE OF ECCLESIASTICAL AUTHORITIES ALONG WITH THE SINNERS IN THE CAULDRON.



A CONSERVATOR CAREFULLY CONSOLIDATES
A RENDERING OF THE DEVIL WITHIN THE
SCENE DEPICTING HELL.

main door one is immediately enveloped by six magnificent paintings, which together form one of the most original and emotionally haunting creations in New World colonial painting. In this group, Tadeo Escalante—who also recorded on these walls the date this masterwork was finished, 1802—creates a truly apocalyptic vision starkly contrasting with the section depicting *La Gloria* (Ascension) in which saints, angels, and devout figures, including the painter himself, are seen floating toward heaven accompanied by God. The other sections of the mural depict a far more ominous vision marked by death and darkness. In *El árbol de la vida* (The Tree of Life), *Las dos muertes* (The Two Deaths) and *Las postrimerías* (The End of Times), the image of the skull reigns supreme over a series of scenes culminating with the magnificent *El infierno* (Hell). Here, a group of contorted Hieronymus Bosch-like figures writhe in agony among the cauldrons and other tortures of hell's abyss.

"I see these paintings as an attempt by their creators to serve specific didactic or catechistic purposes," emphasizes José Alfonso Baigorri, a Spanish priest who has ministered at the Huaru church since March 2006. "I often use these works to illustrate certain commentaries during my own sermons."

The possible catechistic applications of the Huaru images seem nearly infinite. The entire nave of the church is lavishly decorated with monumental altarpieces depicting various saints. Representations of courtly life, caryatids and ornamental motifs, images of the church fathers and the life of the Virgin soar above our heads, finally fusing with animal motifs, coats of arms from unimaginable countries, as well as fruits and flowers, which extend to the very arches of the sanctuary. All of these details are rendered in the most astonishingly vivid colors. Incredibly, we are left

Tadeo Escalante

THE MYSTERIOUS WORLD OF
A MESTIZO PAINTER

Seated in a café on the Plaza de Armas in Cuzco, historian Jorge Flores Ochoa ended our interview saying, "Tadeo Escalante is a character in search of a biographer." Born in this city, Flores Ochoa is the joint author, with Elizabeth Kuon and Roberto Samanez, of *Pintura mural en el sur andino* [Mural Painting in the Andean South], one of the most important books on Peruvian Colonial art. He believes that the most significant work on the Mestizo painter remains to be done: "The truth is that we know very little about him, in spite of how much he painted: the entire Church of Huaru, two mills, a church that looks more like a bakery, and possibly two interiors of the churches in Papres and Corma."

So what do we know about this character who for countless years decorated walls, friezes, and the most remote recesses of the ceiling in the Church of Huaru? In fact, not much. That he was born in Acomayo, Cuzco, possibly in 1770 and that he died perhaps in 1840. That he was apparently Mestizo, a descendent of the clan or family of the Inca Atahualpa. The images the painter left of himself also add to the elusiveness of his profile. Each one shows him in a different way: as a Spanish eighteenth-century knight with an emblem of the Acomayo Mill, as an Indian in Bethlehem Chapel, and finally as a seraphic figure at Huaru, among a group of saints ascending to heaven.

Escalante's work is spread around Cuzco and the southern villages of Acomayo and Corma. At the Convent of Santa Catalina in the city center, part of what is now a busy museum, there is a chapel open to the public that is completely decorated with a mural painting attributed to Tadeo Escalante. "I don't know if this is Escalante's work," says Flores Ochoa. "I believe we have not reached that level of certainty. The style is rather different. Also, the work at Santa Catalina is very Catholic. What we have here are religious scenes." A response of this kind stirs up a number of questions: "Couldn't the message of the paintings at Huaru be considered Catholic? Isn't it possible that Escalante painted Santa Catalina with some intentions and Huaru with others? What are these "anti-Catholic" messages in the paintings at Huaru? Was Escalante irreverent?"





A RENDERING OF ST. CHRISTOPHER GRACES THE FACADE OF THE SO-CALLED MOLINO DE LOS INCAS, FACING PAGE, WHILE A SCENE DEPICTING THE TREE OF LIFE ADORN THE INTERIOR.

In the Peruvian classic *Buscando un inca: identidad y utopía en los Andes* (*In search of an Inca: Identity and Utopia in the Andes*), the historian Alberto Flores Galindo analyzes the work at Huaró. His study is based on the revolutionary dreams of rebel leaders such as Gabriel Aguilar, whose revolt was put down three years after work on the church was completed, in 1805. To Flores Galindo, the paintings in the space below the choir are subversive. Images in which death appears to be dominant, in which we must confront the crossed destinies of the poor and the rich, represent the binary order associated with Andean utopia. Half smiling, Flores Ochoa adds: "In themselves, these images did not contradict the idea of whomever ordered them to be painted. In this same Catholic church it is said that we are all sinners; what is disturbing is that the images admit two readings."

However, the theories of Flores Ochoa, Kuon, and Samanez take a different tack. To them, there were hidden messages at Huaró, like an encrypted code, directed toward members of pro-independence ritual societies. For these scholars, this would be the consciousness of death, so important in a person's passage from ordinary life to a life of esoteric, philosophical, and patriotic speculation in that period. "Societies organized in that way were more numerous than is believed," points out Flores Ochoa. What is the basis for the theories of these scholars? They find it in the characteristics of one of the artist's last and most personal works, which he rendered on the walls of two mills in and around his house in Acomayo. There, Escalante, already an old man removed from the haste and pressures of contracts, let his personal imagination loose. Thus, he rendered a series of images of the creation of the universe in the so-called "Molino de la Creación" [Mill of Creation] and of the Inca lineage in the more famous "Molino de

los Incas" [Mill of the Incas]. We think they held secret meetings in these mills."

After a long day of travel, we arrive at Acomayo, in search of the mills and the disturbing images. Was Escalante a conspirator? The house in which these secret meetings may have taken place is still in perfect condition, up the hill in a peaceful, almost uninhabited village. Deployed in a line, the Inca figures appear to flank the site, and in the background, there is an image of the four elements of the earth and an official-looking table. The painting allows us to imagine Escalante presiding over these meetings. A shiver goes down my spine.

Evening is falling, and we head off in search of the artist's other works. After almost two more hours in a van, we reach the village of Corma. Enormous and on the verge of collapse, the huge church seems to rise over us with great effort. Now abandoned by the Catholic Church, its fate is left to the villagers. Today, the village has opened its doors and is cleaning up its environs because we are approaching July 25, the date for celebrating its patron saint, James. A community group—villagers who have left their fieldwork for this day only—is trying to bring order to the vast nave in which some sculptures and ancient altarpieces are barely standing. The tremendous walls are all painted white, but in some interstices we can make out the presence of mural painting. Estrada confirms that mural paintings appear to be hidden on all the walls. She calculates that it is about 1,000 square meters. We are shocked. Who ordered all these paintings to be covered over? Leon Huallpa, a young villager in the community, has the answer. "According to our grandparents' stories, it was the priest, Ángel Canal. He had the paintings covered with white paint. That would have been more than 100 years ago." What could have been his reason?, I ask. The answer stops us cold: "People weren't paying attention in mass because of the walls; instead of paying attention to the priest, they were distracted by looking at the figures on the walls. Our grandparents told us they were beautiful; there were wonders on those walls."

Is anyone out there brave enough to try to restore them?



THE FACADE OF SAN JUAN BAUTISTA IN HUARO, ABOVE. BELOW, BERTRAND DU VIGNAUD, PRESIDENT OF WORLD MONUMENTS FUND EUROPE; MARCELA TEMPLE DE PÉREZ DE CUÉLLAR; MEMBERS OF PERU'S NATIONAL INSTITUTE OF CULTURE (INC); AND OTHER DISTINGUISHED GUESTS MARK THE COMPLETION OF THE MURAL RESTORATION ON JANUARY 28.



with the impression that Escalante finished these murals only a few days ago. Comparing the work of the Peruvian technicians with the photographs appearing in books on colonial painting is even more surprising. The restoration has proved a tremendous success.

"It all began with a phone call from Marcela Temple de Pérez de Cuellar," says Huaró project coordinator architect Edwin Benavente in his office at the National Institute of Culture in Lima, where he serves as director of the National Heritage Office. In 2001, Bertrand du Vignaud, president of the World Monuments Fund in Europe, had decided to organize a trip to Peru for some of his organization's supporters. Pérez de Cuellar, the wife of a former UN Secretary General,

was helping to organize the trip. Among other things on their itinerary, she wanted the group to visit some of the colonial churches between the former Inca centers of Cuzco and Pikillacta. Their stop at Huaró, says Benavente, was pivotal. "We spent a long time in the church," wrote Pérez de Cuellar in a correspondence. "We admired each detail as if it were a great work of art. When we left, I sensed that everyone had been truly impressed at having found a church that guarded such beauty in such a remote and desolate place."

For local residents, the church has always served as the town's focal point, having been built only a few years after the Jesuits arrived in Cuzco in 1571. From there, their religious domination would extend to neighboring indigenous communities on the orders of Viceroy Toledo. Some believe it was the oppression of the native population under the Spanish that influenced the naming of the church—San Juan Bautista de Huaró, patron saint of the meek and the dispossessed. To facilitate the evangelization of the area's indigenous population, various local artists commenced work on the structure's ornamentation sometime around 1675. This work continued over the years, with paintings gradually being inserted one on top of the other. Limited ornamentation began first in the chancel, then proceeded on the walls of the nave and the choir loft. Finally, decoration was applied to the vestibule, extending to the upper part of the nave and the flat ceiling. The entire space became enveloped in dazzling color. In time, however, this outstanding legacy had fallen into a dangerous state of disrepair.

Ada Estrada remembers that the crew's initial objectives did not include a global intervention. The work would consist of cleaning the paint surfaces and replastering some sections before proceeding with reintegrating the images. However, a concentration of kikullo grass (*Pennisetum clandestinum*) had caused a great deal of humidity to filter into the church's adobe structure. This, together with damage wrought by previous restorations—slipshod structural consolidations, excessive use of cotton and polyvinyl acetate, a retouching adhesive—as well as vandalism, had destroyed a considerable portion of the paintings. Representative sections of the *Infierno* and even arch decorations were virtually lost.

The work was organized in a series of stages, including different levels of intervention based on the specific deterioration of the paintings, which in some cases required research of the original materials used by Escalante and his predecessors to improve maintenance and restoration techniques or adapt them to a Highland Peruvian context. "We performed a chemical analysis and found that the original technique used for manufacturing the walls often omitted certain essential materials: in many sections little straw was used in the adobe, while in others the straw content was excessive," Estrada explains. This led to partial disintegration of the adobe walls, as well as an alarming level of cracking and support deterioration. The restorers particularly encountered problems in the choir loft, which extended to the friezes along the gospel and epistle sides (left and right) of the nave, as well as along wall bases. The greatest challenge was undoubtedly posed by the friezes of the chancel. Unlike the paintings in other parts of the church, which could be

treated directly on the wall, mural fragments had to be removed like delicate bits of canvas from this crucial section and then reset after treatment.

"The first thing we did was to cover the wall paintings with a protective layer of paraloid, a highly stable adhesive, and then with gauze," Estrada explains. Once the surface had been removed, the structure of the wall itself was directly treated, filling in cracks and fissures until a smooth surface was achieved. The same process was also applied to the reverse sides of the separated fragments. In order to reset the wall, local materials had to be used. "In Cuzco, we were trained in European restoration techniques, which were designed to deal with conservation of mural painting in the form of frescoes



THE CHURCH REMAINS A CENTER OF CIVIC LIFE FOR THE VILLAGE OF HUARO.



DECORATIVE DETAILS FROM TADEO ESCALANTE'S WORK INCLUDE FROM TOP, MUSICIANS IN THE CONVENT OF SANTA CATALINA, CUZCO; AN ORNAMENT FROM THE CHURCH IN CORMA; AND SCENES AT HUARO. FACING PAGE: MEMBERS OF THE RESTORATION TEAM FROM LEFT, TANIA ALVAREZ TINTAYA, VIRGINIA BELLIDO HUARCA, TERESA MARQUEZ GAMARRA, JORGE ORTIZ JARA, ADA ESTRADA IBERICO, JULIO NINANTAY LOAIZA, GINO PRIETO GONGORA, GRIMALDO PONCE DE LEON VILLACORTA



on concrete supports. We thus had to apply new technologies that were compatible with the Andean environment, as well as with the church's adobe construction and the techniques employed by Tadeo Escalante. We used local materials, including mucilage from the *jahuancollay*, a thorned plant with a powerfully adhesive sap that works quite well as a replacement [for polyvinyl acetate]. I asked Ada if this technique was used in the most representative areas of the church, for example the remarkable vestibule. She said it was not. Of the 1,371 square meters of wall painting, only about 300 required this form of "intensive surgery."

On our third day at Huaró, after viewing and revisiting each of the restored areas and their paintings, the inevitable questions arose concerning the future of this magnificent project.

Despite its proximity to Cuzco, which sees thousands of visitors a year, Huaró is seldom frequented by tourists, who tend to venture north of the Inca capital to better-known sites on the Inca trail such as Machu Picchu and Ollantaytambo. "Now that the church has been restored, we are hoping it will become part of a new tourist corridor, so that the world can begin to know something about us," says Juan Carlos Rivero Escobar, mayor of Huaró, who is banking on the restoration serving as a catalyst for community development. But there are a number of obstacles to overcome if his visions of urban renewal are to come to fruition.

One of the most critical problems facing the INC in Cuzco involves the destruction of heritage by the locals themselves. The problem can be attributed in large part to a lack of education, says David Ugarte, director of the INC in Cuzco, noting that future activities at Huaró will be geared specifically to addressing these issues. "The restoration provides an articulated starting point, one which we believe is beginning to kindle a sense of collective consciousness among the people," says Benavente. "What we have done is to involve the parish, the community, local teachers, so that they will use the building for workshops aimed at teaching children about the historic and artistic wealth that surrounds them. The first thing we need to do is generate a consciousness to safeguard what we have, and then to isolate particular iconography, so that a series of images can be made using various materials—such as cardboard, wood, and paper. Tourists could then purchase these items as souvenirs." Luis Ochoa Palomino, director of the town's Narciso Aréstegui School for nearly 14 years, looks out at an asphalt ballcourt where several students are playing. "The paintings are undoubtedly the most beautiful thing we have in Huaró," he says. Fourteen of his students have enrolled in the "Defenders of Our Heritage" program, which is part of the Pikillacta Masterplan, an initiative of INC Cuzco that seeks to identify a corridor of towns in south of the Inca capital. Katherin Castro and Efraín Alegria, institute technicians involved in drafting the plan, explain its objectives: "The students will bring the training and information we provide back to their own schools, districts and communities, thus fostering understanding and protection of their own cultural legacy," says Castro.

Can collective consciousness be solidly built using this church and its treasures as a foundation? There is certainly a precedent. The Museo de Piedras Sagradas (Museum of Sacred Stones), which operates out of the town's municipal building, was spearheaded by Renato Dávila, an anthropologist who began collecting Inca and Pre-Inca lithic pieces as a hobby. The project has attracted the efforts of the entire community. "At first we couldn't believe it," says Luis Ochoa Palomino. "Now we fully understand its value." In a room containing more than 300 stones, which he polishes, cleans, and classifies, Dávila watches his museum collection grow with each passing day. "Now the people of Huaró knock on my door," he says, "and bring me more and more stones." ■



WATCH SITE UPDATE

Battle for Battersea

THE SAGA OF THE LONDON LANDMARK CONTINUES



ir Giles Gilbert Scott's graceful art-deco Battersea Power Station—famed for its appearance in film and on a 1977 Pink Floyd album cover—defines the River Thames just west of the Houses of Parliament. Passing it on a commuter train from Victoria Station, Europe's largest brick structure is as synonymous with London as the red telephone box, which Gilbert Scott also designed. Viewed from the river, its front two chimneys and gently dilapidated dock provide a contemplative landmark, massive in scale, yet quietly settled within its surroundings. It is painful to imagine its replacement by yet another soulless apartment block with no connection to a geographical location or time period. Yet this would appear to be its fate. This past December, the power station's owner, Parkview International, announced it was selling Battersea to Ireland-based Treasury Holdings for £390 million, while leaving the historic structure in worse condition than when they acquired it 13 years ago. The move marks another depressing but predictable chapter in Battersea's history.

Like the Bankside Power Station, which was converted into the phenomenally successful Tate Modern, Battersea, whose construction began in 1929, tells us a great deal about London's vanishing twentieth-century industrial heritage. Battersea produced electricity for much of London between 1955 and 1975.

The sulphur dioxide it produced finally ceased belching from its chimneys in 1983. Even if not all in the architectural world love it, none would doubt its success as a building and the importance of its surviving but never-seen art-deco interiors, which include faience tiles, bronze doors, and marble walls. As power stations go, Battersea is beautiful. In fact most Londoners adore Battersea with an unquestioning but perhaps inexplicable affection; it is a comforting and distinctive landmark of London, as much as St. Paul's Cathedral or Westminster Abbey.

The station was decommissioned in 1984 when it was bought by John Broome, then owner of Alton Towers theme park. His leisure scheme, famously endorsed by former Prime Minister Margaret Thatcher, collapsed amid spiralling costs. His contribution, although possibly with good intentions, resulted only in the removal of the roof and east wall before work stopped in 1987.

The site was then bought by property tycoon Victor Hwang's offshore Parkview International in 1993. He proposed a £1.5 billion makeover of the massive 15-hectare site, complete with two hotels, 650 homes, movie theaters, and a vast retail space within the historic shell. Sir Philip Dowson, former president of the Royal Academy, drew up a master plan while Nick Grimshaw, designer of the Eden project and Waterloo's Eurostar terminal, designed the shopping center.

When WMF placed Battersea Power Station on its 2004 list of 100 *Most Endangered Sites*, it was perceived as a controversial move given a plan was technically "in place" and complete redevelopment slated to finish in 2008. Given the situation, WMF was right to list the site.

In July 2006, Victor Hwang took personal control of the power station when he appointed himself executive director of the project with his son Leo as vice-president and his daughter Vicky as director of leasing. Vicky's enthusiasm was at that moment seemingly unbounded. She was quoted in *The New York Times* on November 24th, 2006 saying: "We see the power station as comparable to the Eiffel Tower or to the Empire State Building. People love this building; I haven't had any negativity at all. There is a huge desire for this to happen." Less than a week later her father sold the power station.

Certain parts of Parkview's plans, a hotel that would have crept along the west wall of the station, for instance, did worry conservationists, but at least major parts of the historic structure would have been rescued. Had Parkview succeeded in achieving the model they proposed, the original architectural blueprint would have survived, albeit with a shopping mall on the inside. Battersea certainly cannot afford to ignore the requirements of commercial backers.

Yet with Victor Hwang's recent departure, this debate is now academic. His elaborate models and websites showing the redevelopment scheme seem as hollow as the station itself. Certainly Battersea Council members were strung along, giving permission for anything he suggested and ultimately for the four chimneys to be replaced as Parkview deemed them "structurally unsafe."

OPENING SPREAD: A VIEW OF BATTERSEA FROM SOUTH EAST. THE BOILER HOUSE WAS LOCATED BETWEEN FOUR CHIMNEYS WHILE THE LOWER BLOCKS TO THE RIGHT ARE THE 'B' STATION TURBINE HALL AND SWITCH HOUSE. ELABORATE PLANS TO REDEVELOP THE SITE PUBLISHED IN 2002, BELOW, WERE NEVER REALIZED.



A report last year, commissioned jointly by WMF and the 20th Century Society, indicated that the poor condition and fissures in the chimneys had been exaggerated and repair in fact would be a cheaper and more viable option.

Parkview claimed it had spent a few million pounds safeguarding the structure, yet when representatives of WMF in Britain visited the site in November 2006 there was no evidence of this. In fact, according to the *Financial Times* on December 1st, £200 million was spent on development plans and nine different architectural practices alone. It seems clear that monies spent on the station over the past 13 years have gone to project development rather than to any structural repair of the building itself—unless one discounts a special nesting site for hawks that went up a few years ago.

Meanwhile, representatives of English Heritage, the UK statutory body in charge of the station, admit they were “taken in.” A spokesman for them claimed they always “had to take Parkview’s intentions at face value.” They now admit to feeling “depressed” about the current situation. However, they see no reason why the new owners Treasury Holdings can’t pick up Parkview’s old scheme and run with it, although their belief that work will begin this spring seems optimistic, given that the new owners want another five years before they even announce their plans. English Heritage’s powers are limited. They can demand urgent repairs, but a “compulsory purchase order” would be unfeasible with a project of this magnitude. English Heritage has demanded a meeting with Treasury Holdings to gauge their intentions, but as yet one is not scheduled.

The amount of money needed to restore the site is beyond most commercial reach. The other issue that has bedevilled Battersea is the question of transport links. In 2004, Hwang promised to spend £25 million for an upgrade to the railway station, and his plans showed improved walkways and access from the river. Ken Livingstone, the Mayor of London, quite sensibly pointed out last year that this issue is key to unlocking the site. Yet Battersea is located opposite Victoria, London’s busiest mainline railway station, separated only by a narrow stretch of the River Thames. It is near the fashionable and affluent area of Chelsea and overlooks the fine green space of Battersea Park, a major sports center. In east London billions are being spent starting from scratch on an entire region





for the 2012 London Olympics. Could the power station be re-developed as a major central London Olympic site? If not, why not learn from the Tate Modern, which is expanding again due to high visitor numbers and has become something more inspiring than a shopping center. Battersea's riverside setting would make a perfect concert venue, and would not involve the trek out of central London that many venues demand. But the government seems to prefer concentrating on visionary new projects such as Wembley Stadium, the Dome, and sites chosen for the 2012 Olympics.

In October and November last year, Battersea was temporarily taken over by the edgy Serpentine Gallery and the station's rusting shell turned into a dramatic setting for its "China Power Station Part 1" exhibition. The multimedia exhibition of contemporary Chinese art and architecture drew a large audience who were enthralled by this intense setting for film, sound, and a wall of rotting apples. Bicycles were provided to cycle around the site while the renowned dim-sum restaurant Yauatcha took over one pavilion owned by Parkview. For five weeks the site was gloriously alive and active. Visitors were able to stand inside the monumental shell and appreciate its sheer scale.

It remains to be seen how Battersea will fare under its new owners. Early announcements indicate a wish to use many of the elements of the Parkview plans. There are worrying signs that they will try to increase the percentage of housing on the site, and Rob Davies, development director at Treasury Holdings, backed by Irish property developers John Ronan and Richard Barrett, has already voiced a desire to remove the chimneys. Yet without the chimneys and the historic fabric, what is the power station? It is of course a massive opportunity for real estate with a burdensome ruin on it, and some years back, Hwang told WMF in Britain Director Colin Amery that he had just bought a 40-acre site of "prime real estate."

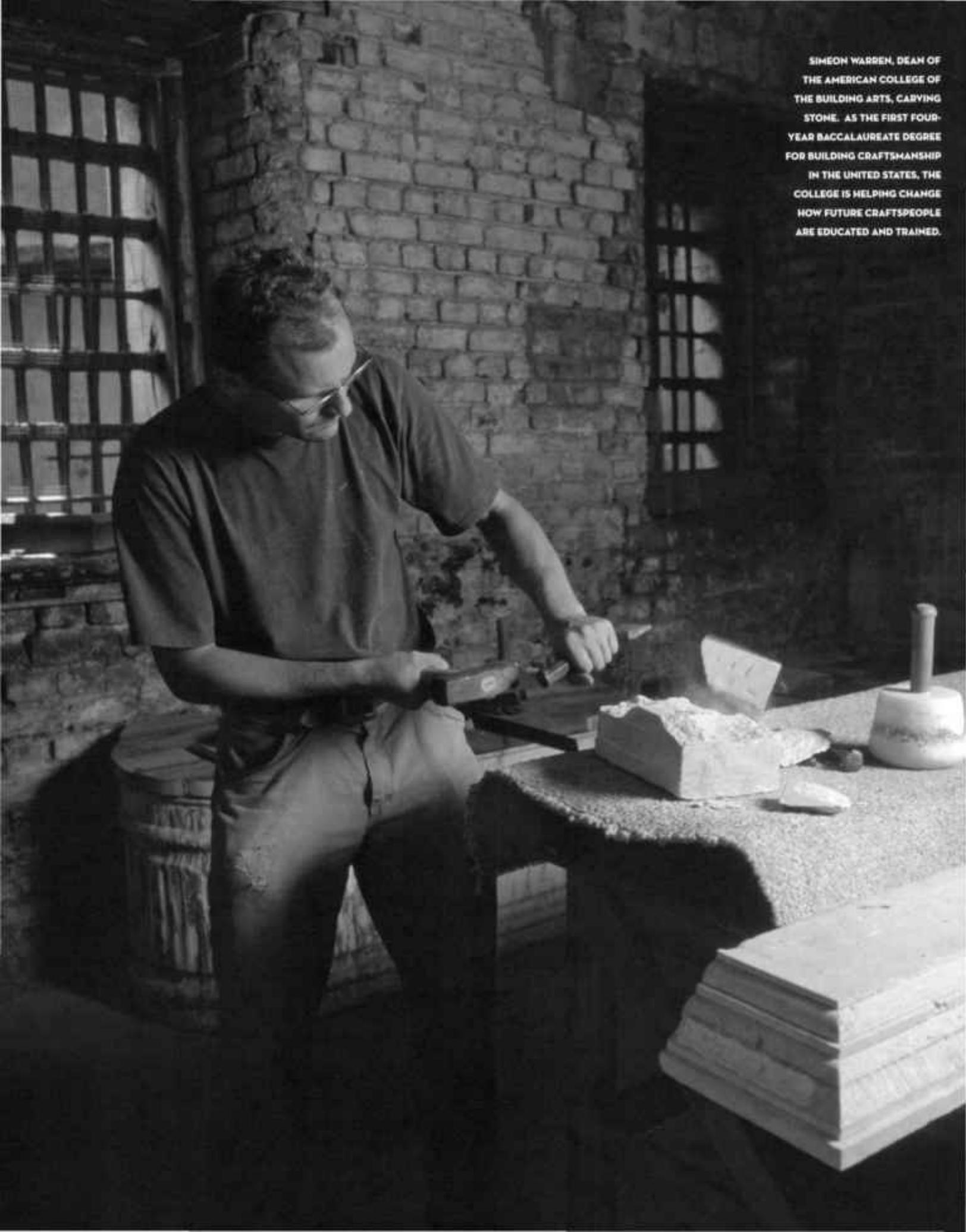
There are rumors that Treasury Holdings is working on plans with architect Lord Norman Foster to increase the residential components of the site at a cost of some of the retail and leisure elements. While they have promised to invest £2 billion on redeveloping the site, their scheme would not be ready for another five years at least. One of the elements of the original plan likely to be kept is "London's most exclusive restaurant table," one table seating 14 people at the top of one of the chimneys. Presumably this would be a "replaced" chimney if the developer sticks to his word to put them back once removed. When WMF asked about the plan, Treasury Holdings refused to respond.

The failure of Battersea is not just a tale of developer's greed and neglect, but also a failure of ideas to regenerate London's most dramatic icon. The next few years are key for the station, but unless a developer is serious about restoring the historic fabric, Battersea faces a grim choice between rapid destruction or gentle dilapidation. ■



THOUGH DILAPIDATED, BATTERSEA'S ENORMOUS ART-DECO INTERIORS STILL BOAST DETAILS LIKE SIR GILES GILBERT SCOTT'S ORIGINAL MARBLE WALLS AND COLUMNS.

SIMEON WARREN, DEAN OF THE AMERICAN COLLEGE OF THE BUILDING ARTS, CARVING STONE. AS THE FIRST FOUR-YEAR BACCALAUREATE DEGREE FOR BUILDING CRAFTSMANSHIP IN THE UNITED STATES, THE COLLEGE IS HELPING CHANGE HOW FUTURE CRAFTSPEOPLE ARE EDUCATED AND TRAINED.



Earl Barthé is the Jelly Roll Morton of plaster. Like the legendary jazz pianist, the 84-year-old New Orleans craftsman is a master of improvisation in his medium. In fact, he often describes his highly ornate ceiling medallions and crown moldings in musical terms, such as “arias in plaster.” Barthé, a self-described “Creole of Color,” is descended from a long line of plasterers, beginning with his great-great grandfather who came to New Orleans from France via Haiti.

In 2005, the National Endowment for the Arts awarded Barthé a prestigious National Heritage Fellowship, recognizing his lifetime achievement in building craftsmanship. As he described in an interview at the time, the Barthé family is one of the most recognized plaster families in the United States. “My father was a plasterer, his father was a plasterer, his uncles and everybody else were plasterers. The Barthé children just knew they had to be plasterers. Daddy didn’t want me to be a doctor, a lawyer, or an Indian chief. He wanted me to be a plasterer.” Hurchail Barthé, Earl’s son, continued the tradition by learning the plaster trade.

But a profound shift has occurred over the last generation. “Plastering families wanted their children to follow in their footsteps,” said Barthé. “You don’t have that as much now. I have grandchildren who are nurses, doctors, and things like that. It would be difficult to say, ‘I want you to be a plasterer.’” But the future of New Orleans and the United State’s architectural heritage depends on just that—the survival of not just plastering, but all the traditional building trades.

Rebuilding the Building Arts

by MORRIS HYLTON III

The loss of craftspeople experienced in historic building materials and techniques is directly related to the steady erosion of traditional systems of training. The causes are myriad and complex.

The introduction of modern building materials and technologies resulting from the rise in industrialization over the last 100 or so years—but particularly since World War II—has impacted how craftspeople are trained and employed. Small family-oriented workshops have been replaced with larger construction companies, resulting in the loss of apprenticeship opportunities in traditional construction methods. Existing apprenticeship programs, such as those developed and supported by the major trade unions like the United Brotherhood of Carpenters, focus primarily on contemporary building applications and, at best, offer only an introduction to traditional technologies and preservation.

Then there are the changes in the American public educational system. Most schools expect high-level students to pursue a two-year associates or four-year baccalaureate degree after graduation. In 2002, for instance, the federal government—as part of the “No Child Left Behind” Act—proposed to significantly decrease funds allocated toward vocational education. With strong opposition from organizations like the Association for Career Technical Education and National Association of Secondary School Principals, the original bill was altered and the federal monies for vocational programs remained intact. But despite the survival of the funding for vocational programs, the majority of support goes toward training in computers and other technologies. Much less is allocated for instruction in the construction trades.

But perhaps the greatest impact on the recruitment and education of building craftspeople is the lack of respect our society affords to those who work with their hands. The skills of building artisans are often unappreciated. Individuals who work with their hands—as well as their heads—are

**WMF IS
ENSURING
A BRIGHTER
FUTURE FOR
THE FIELD OF
PRESERVATION
BY TRAINING
CRAFTSMEN
AND REVIVING
LOST ARTS.**



often treated as second-class citizens. To echo the sentiment of Earl Barthé: How many parents today encourage their children to be plasterers or masons or timber framers instead of doctors, lawyers, and bankers?

These societal and economic changes and their impact on the traditional building trades have occurred over several generations, and it will take several generations to reverse the trend. WMF is leading the effort.

For more than four decades, building-crafts training in the service of preservation has been a global theme of WMF programs. In Cambodia, WMF helped create a new generation of preservation-minded masons to conserve the ancient remains of Angkor after many of the country's artisans lost their lives during the violent rule of the Khmer Rouge. WMF supported the formation of a school of carpentry in Chiloé, Chile, to aid in the restoration of hundreds of seventeenth- and eighteenth-century churches, constructed by local craftsman using historic shipbuilding techniques and methods. The churches—threat-

IN 2006, WMF LAUNCHED A FIELD SCHOOL AT THE MOUNT LEBANON SHAKER VILLAGE WHERE APPRENTICES FROM THE AMERICAN COLLEGE OF THE BUILDING ARTS AND FRENCH COMPAGNONS WORKED WITH STUDENTS FROM THE UNIVERSITY OF FLORIDA COLLEGE OF DESIGN, CONSTRUCTION, AND PLANNING AND THE BROOKLYN HIGH SCHOOL OF THE ARTS TO RESTORE THE TIMBER FRAME OF AN 1830 GRANARY.

American College of the Building Arts, Charleston, SC

In 2003, WMF facilitated a partnership between the Association Ouvrière des Compagnons du Devoir et Tour de France—France's highly regarded system for education building craftsman—and the then School of the Building Arts in Charleston, SC, (see *ICON* Spring 2005). The School of the Building Arts was founded in 1988 to address the lack of qualified craftspeople needed to restore the historic buildings of Charleston following Hurricane Hugo. The Compagnons served as a model as the leaders and staff of the School of Building Arts developed a four-year program and, in 2005, launched the American College of the Building Arts (ACBA), the first baccalaureate degree for building craftsmanship in the United States. "You can't restore historic buildings if you don't have the skilled craftspeople," says Simeon Warren, Dean of the College and Professor of Architectural Stone Carving. "Over the past 100 years, the educational pathways that led to that kind of skill level have broken down.

We're trying to help rebuild those systems."

The ACBA educates and trains artisans in the traditional building arts to foster exceptional craftsmanship and encourage the preservation, enrichment, and appreciation of architectural heritage. Students major in one of seven crafts: timber framing, carpentry, masonry, stone carving, plaster, ornamental iron work, and painting and finishes. "As a college, we're trying to reconnect the hand-skills with the mind," says Warren. "And we emphasize the theoretical knowledge that you need to really learn the trade and eventually become a great craftsman."



Brooklyn Stained Glass Conservation Center

At the post-graduate level, WMF supported the formation of the Brooklyn Stained Glass Conservation Center, the nation's only non-profit dedicated to educating stained glass artisans and conservators. "We've had six full-time apprentices since we've started and each one has been successful," says David Fraser, executive director and senior conservator of the center. A partnership with the Preservation Arts and Technology High School Program in Brooklyn, the first high school in the United States to teach the building trades using the theme of historic preservation, also brings interns into the studio each summer. "We've had the most wonderful kids, and each one has designed and made a stained glass window," says Fraser. "We give them these skills, these twelfth-century techniques, and they get a whole new sense of what they're capable of." Since 2003, WMF has helped fund an exchange program that allows French stained glass artisans—early in their apprenticeships and careers—to work at the studio, learning the materials and techniques specific to stained glass in this country, specifically the methods employed by the disciples of Louis Comfort Tiffany.



IN OCTOBER 2006, MORE THAN 50 STUDENTS FROM THE PRIESTLEY HIGH SCHOOL OF ARCHITECTURE AND BUILDING CONSTRUCTION IN NEW ORLEANS PARTICIPATED IN A SERIES OF DEMONSTRATION RESTORATION PROJECTS AND WORKSHOPS SPONSORED BY WMF AND PRESERVATION TRADES NETWORK FOR THE HOLY CROSS NEIGHBORHOOD OF THE CITY'S LOWER NINTH WARD. NEW ORLEANS STUDENTS HAD AN OPPORTUNITY TO WORK WITH FELLOW STUDENTS FROM THE PRESERVATION ARTS & TECHNOLOGY PROGRAM AT THE BROOKLYN HIGH SCHOOL OF THE ARTS.

ened as much by the decline in the number of local craftspeople as by wood rot and insect damage—were placed on the first WMF watch list of 100 *Most Endangered Sites* in 1996.

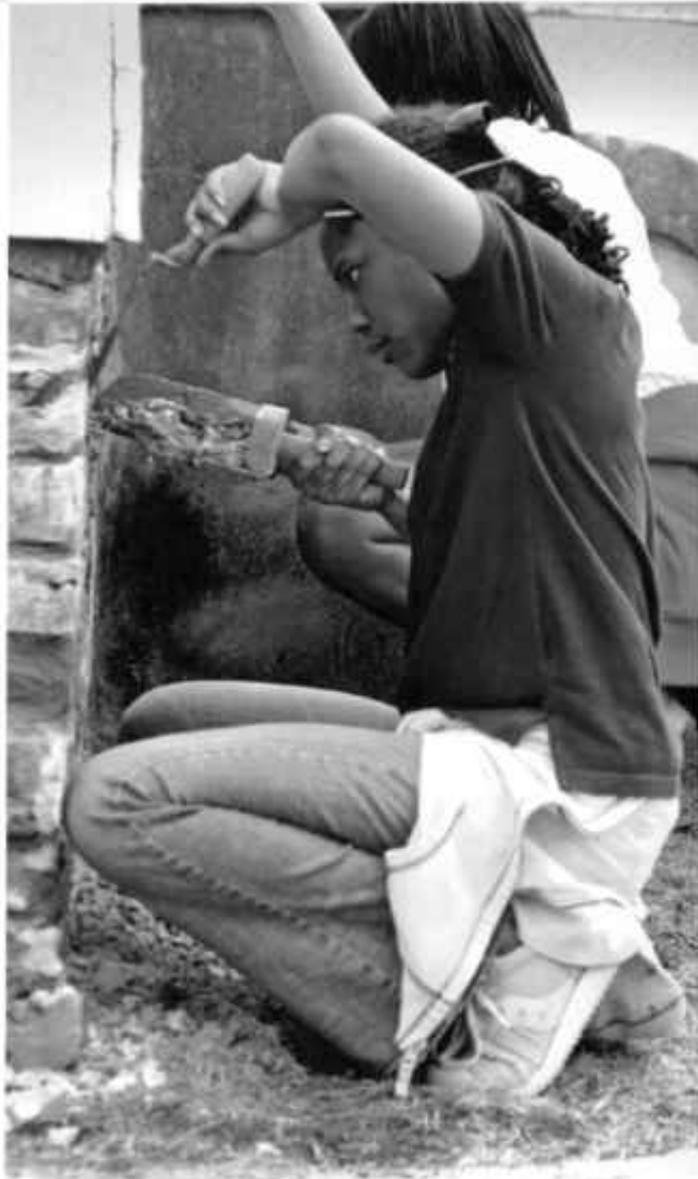
In the United States, WMF has emerged as a leader in a growing effort to raise public awareness of the role of the craftspeople in the preservation process, and to create new and sustain existing educational opportunities for those interested in becoming building artisans. In 1993, WMF convened a symposium that brought together representatives from the public and private sectors to examine how the country's youth and displaced workers could be introduced to technical vocations in preservation and trained to fill jobs. A direct outcome of the symposium was the development of the Preservation Arts & Technology High School program.

In 2000, WMF partnered with the New Jersey Institute of Technology's Center for Architecture and Building Science research to create the nation's first high school dedicated to preservation. Housed within the Brooklyn High School of the Arts, the program exposes its students to historic architecture, traditional building construction, and preservation, while those students majoring in preservation arts take additional hands-on classes focusing on the technical application of the trades and preservation.

Beyond the high school level, which introduces and recruits young people to the building trades and preservation, WMF has supported a number of other innovative educational programs that are changing how the next generation of craftspeople are formally educated and trained. These include the American College of the Building Arts (ACBA), the first four year-year baccalaureate degree for building craftsmanship in the United States, and the Brooklyn Stained Glass Conservation Center, the nation's only non-profit with the mission of training stained glass artisans and conservators (see sidebars).

Employing the lessons learned creating programs like the Preservation Arts & Technology High School, WMF consolidated its activities in 2004 and launched the Traditional Building Arts Initiative. Recognizing the many needs impacting traditional building education, WMF designed a multifaceted approach aimed at raising public and professional awareness and experimenting with new ways to recruit and educate the next generation of building artisans.

WMF has organized and supported a number of forums that bring together people

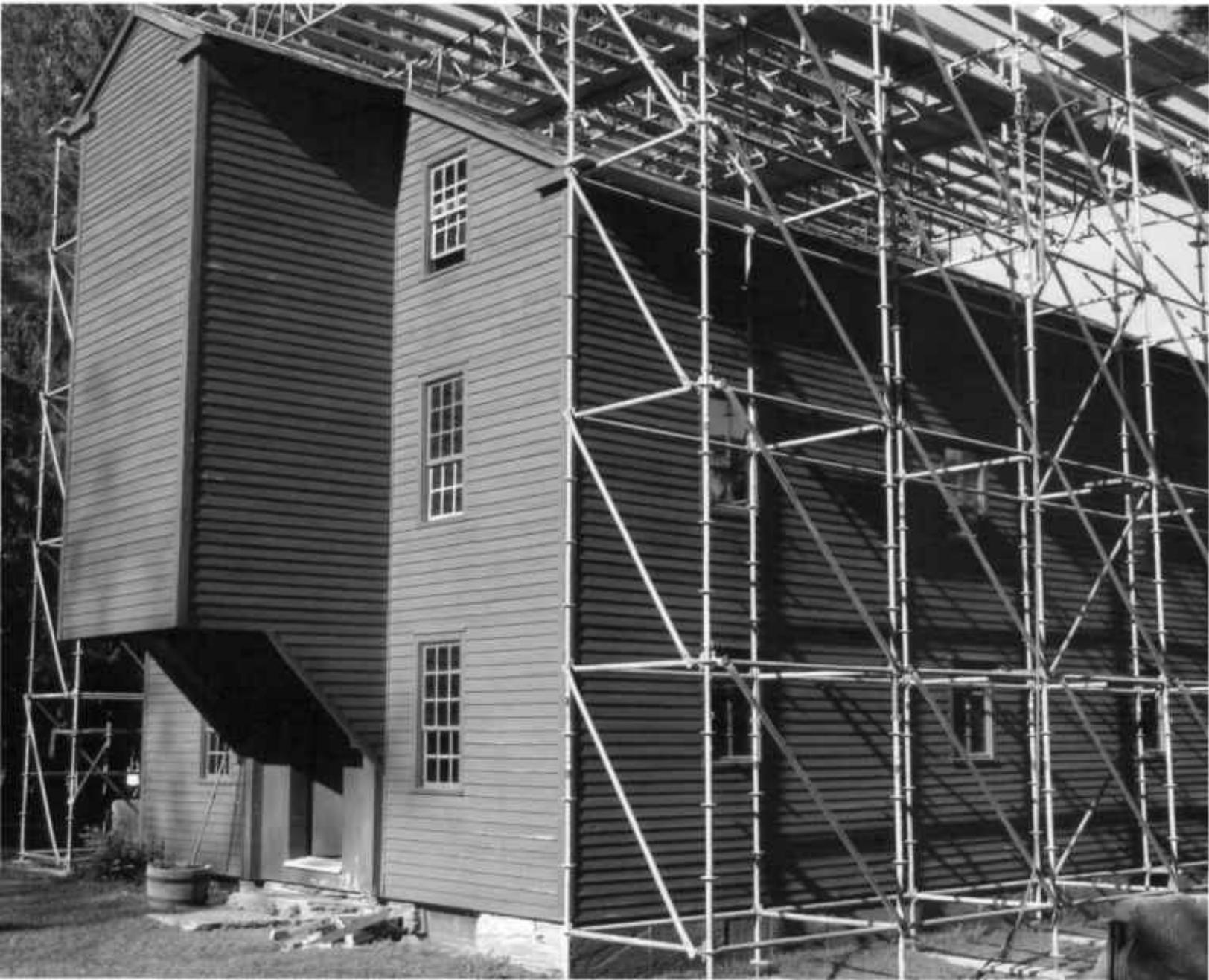


**THE NORTH FAMILY SHAKER
GRANARY—THE ONLY SURVIVING
BUILDING OF ITS KIND—WAS
COMPLETELY ENVELOPED IN
SCAFFOLDING. THE ENCLOSURE,
WHICH PROVIDED SAFE ACCESS
TO THE SITE AND PROTECTION TO
THE ELEMENTS, SERVED AS THE
APPRENTICES AND STUDENTS
PRIMARY “CLASSROOM” DURING
THE TEN-WEEK FIELD SCHOOL.**

from both within and outside the preservation community to learn from one another's experiences and to work together toward a common goal. At Belmont Technical College in St. Clairsville, Ohio, in 2005, WMF participated in and sponsored the first International Trades Education Symposium organized by the Preservation Trades Network—a national, non-profit organization whose mission is to provide educational opportunities in the preservation-focused building trades and to develop a network of interested organizations and individuals. Craftspeople, architecture and preservation specialists, and educators from more than ten countries gathered to share individual experiences. Supported by WMF, Japanese carpenters and members of Kezurou-Kai—an organization dedicated to preserving knowledge of traditional Japanese woodworking skills—underscored the importance of building crafts knowledge as intangible cultural heritage. In Japan, the government designates living master craftspeople as national treasures.

In addition to the public and professional forums, WMF assembled representatives from a number of organizations and groups, such as the National Council for Preservation Education, and formed a task force to examine traditional building education from a national perspective. The trades are not tracked by the federal government or the construction industry, so task force members are currently working on a strategic plan to survey and assess the traditional building trades in the United States one at a time.

While the task force takes a “top-down” approach to building craft education, the traditional building and historic preservation field school developed by WMF is intended to address one of the most important needs from the bottom up. Initiated for the first time at Mount Lebanon Shaker Vil-



Traditional Building and Historic Preservation Field School

WMF partnered with the Preservation Trades Network (PTN), American College of the Building Arts, and the University of Florida's College of Design, Construction and Planning to develop the Traditional Building and Historic Preservation Field School model. Among the school's goals are fostering interaction between craftspeople and preservation specialists, as well as promoting local traditional building and preservation education. In the summer of 2006, first-year students from the American College of the Building Arts and advanced students from France's Association Ouvrière des Compagnons du Devoir et Tour de France worked with architecture and historic preservation graduate students from the University of Florida to survey, document, and restore the timber frame structure of the 1838 North Family Shaker Granary at Mount Lebanon Shaker Village in New Lebanon, New York. "It is a completely unique building in the United States and was meticu-

lously crafted," says Rudy Christian, a master timber framer and project development director for PTN who led the field school. "So it was perfect place for students to step in to the boots of a master builder. Once they learned how to read the building, the carpenter's way of thinking nearly 200 years ago was transferred to the students today. There is no way you could have taught that to them on a blackboard." The field school should serve as a successful model that can be adapted at other cultural heritage sites in the U.S. Discussions are underway for similar schools in Newburgh, New York, and Charleston, South Carolina.



A FIFTH-GENERATION PLASTERER, EARL BARTHÉ RETURNED TO HIS HOME CITY OF NEW ORLEANS IN OCTOBER 2006 TO ACCEPT THE ASKINS ACHIEVEMENT AWARD FOR THE PROMOTION, APPLICATION, AND EDUCATION OF PRESERVATION TRADE SKILLS. DURING HIS VISIT, BARTHÉ VISITED THE DEMONSTRATION RESTORATION PROJECTS AT LAFAYETTE CEMETERY NO. 1, WHICH ARE BEING SPONSORED BY WMF AND IMPLEMENTED BY THE AMERICAN COLLEGE OF THE BUILDING ARTS AND THE PRESERVATION TRADES NETWORK.

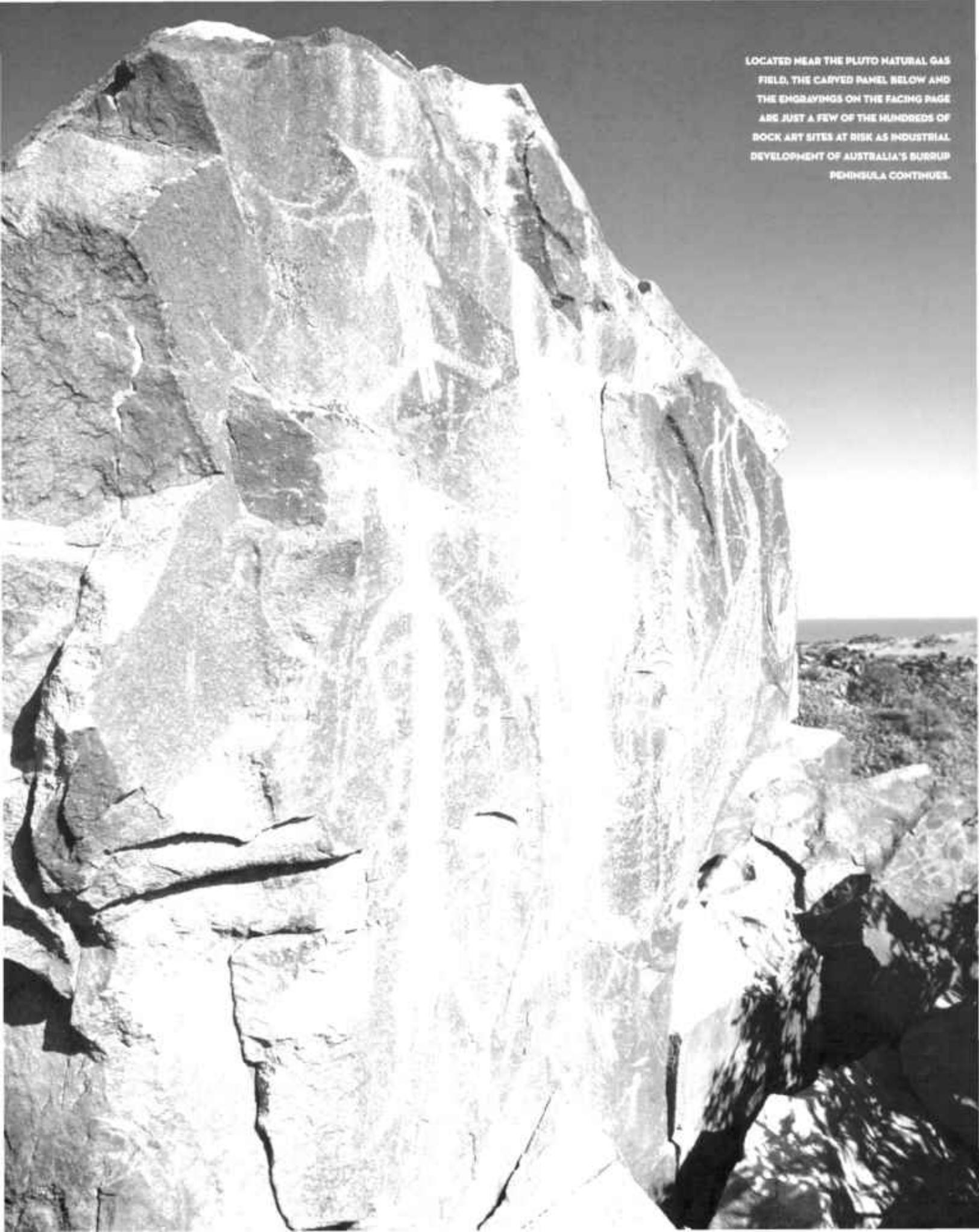
lance in New Lebanon, New York, in summer 2006, the field school model created by WMF brings together building trades apprentices from programs like the ACBA and graduate-level students in architecture, preservation, and allied disciplines and allows them to work together to apply knowledge acquired in the classroom or shop to a real-world project. A 2004 and 2006 WMF Watch site, Mount Lebanon Shaker Village was the physical and spiritual center of the Shaker world. The aesthetic principles that define the Shakers' distinct material culture—including objects, furnishings, and architecture—were first developed at Mount Lebanon along with the concept of craftsmanship as a form of worship.

Based in part on the field-school model developed and employed at Mount Lebanon, WMF collaborated with the Preservation Trades Network and University of Florida College of Design, Construction, and Planning to undertake a series of workshops complementing a number of demonstration restoration projects along the post-Hurricane Katrina Gulf Coast. In late October 2006, over 200 craftspeople and preservation specialists descended on

the Holy Cross neighborhood of New Orleans' Lower Ninth Ward to participate in an International Preservation Trades Workshop and to volunteer on one of four projects to restore the community's historic architecture. A separate workshop was held at the city's Lafayette Cemetery No. 1, where participants repaired and stabilized three historic tombs damaged by the hurricane.

Earl Barthé and his family—who were displaced by the flooding—traveled home to New Orleans so he could be honored at the workshop with an Askins Achievement Award presented by Preservation Trades Network. Named for Jim Askins, the founder of the U.S. National Park Service Preservation Training Center, the award recognizes outstanding contributions and accomplishments in the promotion, education, and application of preservation trades skills. Barthé spoke of his desire to start a formal apprenticeship program to recruit young people to the trades. He also took part in the Lafayette cemetery workshop.

"Meeting Mr. Barthe was a real inspiration," says Mimi Conlon, a first-year ACBA student who participated in the cemetery workshop. "He's amazing, a legend. And when he was talking to us about working with plaster, you got the sense that there is so much you can do with your life when you have these skills." The nation's architectural legacy depends on the transfer and survival of the knowledge of master craftsmen like Barthé to students like Conlon. With the growth in partnerships and projects WMF has helped foster, there is real hope for the future. This summer Conlon will participate in the field school at Mount Lebanon. Inspired by her training at the ABCA and experience at workshops like the one at Lafayette cemetery, she will put her skills to use restoring a stone barn expertly built by the Shakers in 1860, a promising place to begin a career in the building arts. ■



LOCATED NEAR THE PLUTO NATURAL GAS
FIELD, THE CARVED PANEL BELOW AND
THE ENGRAVINGS ON THE FACING PAGE
ARE JUST A FEW OF THE HUNDREDS OF
ROCK ART SITES AT RISK AS INDUSTRIAL
DEVELOPMENT OF AUSTRALIA'S BURRUP
PENINSULA CONTINUES.

It's hard to imagine a more impressive—or more endangered—cultural landscape in Australia than the Dampier Rock Art Site. The largest, and quite possibly oldest, rock art precinct in the world consists of thousands of jagged red Pilbara rocks which, on closer inspection, reveal in their shadowed crevasses or sun-beaten surfaces the images of lively humans, animals, and plants. Some are darkly outlined images of the now-extinct Tasmanian tiger, each so individual in their sleek stripes or wolfish mien that they hint at myriad artists and several millennia of rituals involving the carnivorous marsupial. Others resemble photo negatives, faces created by tapping down through mineral-darkened surfaces to reveal pale rock. They are mysterious, often beautiful clues to generations of industrious artists who, over a period spanning perhaps 20,000 years, roamed this remote archipelago on the northwest coast of Western Australia, which juts into the Indian Ocean.

Yet, unlike the more famous Bradshaw paintings found further north in the Kimberley region, no book has ever been published that celebrates the importance of Dampier and conveys its ethnographic and aesthetic qualities to the public. Nor is there any hint that the reverential care and protection accorded England's Stonehenge, Cambodia's Angkor, or the painted caves of Lascaux, France, will ever be enjoyed here, despite the site's inclusion on WMF's 2006 list of 100 Most Endangered Sites.

Just why Dampier's rock art has failed to attract the kind of advocacy that has propelled the Bradshaw paintings into prominence over the years lies squarely in its location. While the Bradshaws are found in caves on pastoral leases held by sympathetic owners, Dampier's artifacts blanket a 20-kilometer-long sliver of land and sea on which multibillion-dollar industries have set up shop.

When construction of the Northwest Shelf Liquefied Natural Gas (LNG) processing plant began on the

Between a Rock and a Hard Place

by VICTORIA LAURIE

The fate of Australia's Dampier Rock Art Site hangs in the balance



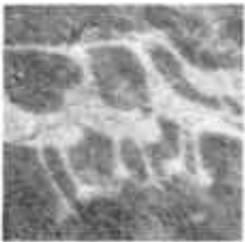
Burrup four decades ago, thousands of petroglyphs were destroyed or removed to make way for the installation and its extensive port facilities, which have since grown into a \$30 billion industrial precinct. Recently, one of the six multi-national resource partners in the Northwest Shelf project, Woodside Energy, announced plans to build its own gas processing plant for its nearby offshore Pluto natural gas reserve on an uncleared site south of the LNG complex, where 165 rock engravings will be disturbed. Most of these, Woodside says, are to be relocated to make way for the plant.



Robert Bednarik, convenor of the International Federation of Rock Art Organizations, says Burrup's problems arise from Australia's flawed heritage legislation. Companies are compelled to conduct impact studies and pay for them, meaning that hired archaeologists conduct surveys that never reach the public domain. "That's why there have been no publications, only dozens of unpublished internal reports, some of which are quite substantial."

In 2006, he self-published the only booklet on Burrup's rock art as part of his advocacy effort. "I have people ringing me up after seeing my book and saying 'Why have we not been told about this?'"

In early December, Labor MP Carmen Lawrence, a former Western Australian premier, Federal Greens senator Rachel Siewert, and Independent MP Peter Andren—aware of growing concern over the fate of Dampier—lodged an emergency application to halt any more disturbance on the Burrup in a bid to hasten a formal decision by Federal Environment and Heritage Minister Ian Campbell to place the rock art site on Australia's National Heritage List, a move that would give the area greater protection under federal heritage laws.



Burrup Peninsula
Proposed National Heritage
Listing Boundary



**A DEEPLY ETCHED CARVING
DEPICTS A TASHMANIAN
TIGER, AN ANIMAL THAT
BECAME EXTINCT ON THE
MAINLAND OF AUSTRALIA
BETWEEN 2,000 AND 3,000
YEARS AGO. BASED ON ITS
STYLE, THE ENGRAVING MAY
SIGNIFICANTLY PREDATE
THE TIME OF THE
ANIMAL'S EXTINCTION.**

Minister Campbell was palpably moved by what he saw when he visited the Burrup last July. "What was amazing to me was how the illustrations in some cases had the clarity of computer images—emus, lizards, turtles, kangaroos, and people. They are so sharp and absolutely stunning, and one of the big things is going to be tourism," he told *The Australian* shortly after his visit.

Yet it seems Campbell was furious at the opposition MPs' emergency application, saying it jeopardized ongoing talks between government and industry to find a compromise position, and has since announced that he may delay making any decision on the site. Amendments to the Environmental Protection and Biodiversity Act currently before the Australian parliament will allow him to defer any decision to list Dampier indefinitely.

In the interim, Campbell's office has been flooded with thousands of protests against further destruction of Burrup's rock engravings. The National Trust of Western Australia said public protest and media focus—prompted in large part by the site's Watch listing—had led to a dramatic twist in December in which both resource giant Woodside Energy and the Western Australian government dropped their opposition to National Heritage Listing of the Burrup peninsula.



Both had previously opposed listing "all or any part of" the Burrup on the grounds that heritage protection laws could limit industrial expansion of Australia's largest—and one of the world's most lucrative—resource projects, the Northwest Shelf. But in a move viewed as an effort to placate public sentiment while clinging to their industrial objectives, both Woodside and the state government have signalled support for listing as long as certain industrial areas—including their proposed Pluto site—are specifically excluded from heritage protection.

Woodside director Keith Spence said strong public support for protection of rock art had prompted the company's change of heart regarding National Heritage Listing. "We recognize there are a lot of opinions out there—we've listened to stakeholders, to the public, and to our own employees," he said. "We can up our game in looking after this national treasure."

The Western Australia National Trust welcomed Woodside's decision, but pointed out that it did not change the fact that hundreds of rock art artifacts were still destined for demolition to make way





for the Pluto plant. "They are trying to make the best of a bad situation, and grudgingly giving ground," said National Trust spokesman Robin Chapple. "They can see the writing is on the wall in terms of future development on the Burrup and they are trying to grab their little piece [of land]."

In another partial conservation gesture, Woodside also signalled it is considering funding a comprehensive survey of all Burrup rock art, which has never been done. It would require the documenting of up to a million rock etchings and could cost several million dollars. The company claims that it already spends around one million dollars a year on rock art management, and has redesigned its Pluto LNG plant. "As a result, Pluto will avoid more than 90 percent of rock art and we are working with local Aborigines to minimize impact on the remainder," a recent company release reported.

The local Aboriginal custodians—the Wong-Goo-Tt-Oo, Ngarluma Yindjibarndi and Yaburara Mardhuhunera peoples—had signed an agreement in 2003 that permitted further industrial development on parts of the Burrup in return for compensation monies and land access. A "no objection" clause in the agreement effectively prevented them from public utterances against rock art removal.

But in January, Woodside was informed by two out of three local indigenous groups they would no longer acquiesce to the destruction of rock art. Their decision was prompted by news that Woodside proposed to shear off rock carvings from the face of large boulders that were too big to move. "They can't slice the rock because it's not right—it's a spiritual issue," said Wong-Goo-Tt-Oo elder Wilfred Hicks. Ngarluma spokesperson Jill Churnside said it was a rampant act of vandalism towards indigenous culture. "We have rights under Section 7 of the Aboriginal Heritage Act as traditional owners to veto destruction of sites but the government refuses to acknowledge this," said Churnside. Rock art supporters say this goes to the heart of the problem raised by the Burrup—that Australia's system of protecting heritage sites, and priceless heritage is expendable in the face of development. The National Trust says the only way to balance the preservation of cultural treasures and building resource wealth for the state will be to create a single, independent authority to manage the Burrup peninsula and surrounding islands.

Western Australian premier Alan Carpenter says the state government has long acknowledged the significant heritage values of Dampier. "Nevertheless, we strongly believe that it is possible to protect these values of the archipelago and that industry and heritage may co-exist in the area."

Only time will tell. ■



THE ENIGMATIC ARCHAIC FACES, ABOVE LEFT, FOUND IN LARGE NUMBERS OVER THE BURRUP ARE AMONG THE EARLIEST ROCK ART WORKS IN THE REGION. THOUGHT TO HAVE BEEN CARVED SOME 25,000 TO 30,000 YEARS AGO, THE IMAGES WERE RENDERED IN NEGATIVE RELIEF. ABOVE, TWO OF THE INDUSTRIAL INSTALLATIONS ON THE NORTHWEST SHELF THAT HAVE PUT THE DAMPIER ROCK ART SITE AT RISK.



SAVING SEGOVIA'S Aqueduct

POLITICAL DIFFERENCES ARE SET ASIDE TO PRESERVE A SPANISH LANDMARK.

by NORMA BARBACCI

Few Watch listings have prompted so much outrage in a nation's national press as WMF's inclusion of the Roman aqueduct in Segovia, Spain, on its 2006 list of 100 Most Endangered Sites. The listing also revealed the problems that can arise when municipalities, regional governments, ministries of culture, and heritage organizations share jurisdiction over the management of a country's patrimony but have disparate notions of what is best for a given site.

Begun in the second half of the first century A.D., the aqueduct at Segovia is a masterpiece of Roman engineering, which continued to provide the Spanish city—100 kilometers northwest of Madrid—with potable water well into the twentieth century. The aqueduct system stretches some 15 kilometers, from its origins at a freshwater source in the Sierra de Guadarrama southeast of the city to the Alcázar, a medieval castle built atop Roman remains on a precipice overlooking the junction of the Eresma and the Clamores valleys, which marks the northwest corner of town. Together with the walls of Tarragona, the aqueduct is one of the two largest surviving Roman structures in Spain.

For most of its route, the aqueduct traverses the landscape through a series of ducts and underground channels. Only for its final stretch, where the system must bridge a deep depression at the Plaza del Azoguejo just below the old part of town, however, does it reach a full height of nearly 30 meters. There, where many of the main roads into Segovia meet, 118 pillars continue to support a two-story arcade.

Thought to have been commissioned by the Flavian emperor Domitian (r. A.D. 81–96), the aqueduct was first repaired at the request of Trajan in A.D. 98, according to the remains of an inscription that graces one of the lower arches. Although the gilded bronze letters of the inscription have long since vanished, holes for the lead pegs that once held them





have permitted the text to be read. Fourteen of the surviving pillars were completely rebuilt between the fourteenth and nineteenth centuries.

Despite its high profile and Segovia's inscription on UNESCO's World Heritage list in 1985, the aqueduct had, until recently, been threatened by lack of maintenance, differential decay of its individual stone blocks, water leakage from the upper viaduct, and in some areas pollution, which has caused the granite ashlar masonry to deteriorate and crack. In an attempt to address the conservation problems the Junta de Castilla y Leon, the regional government, launched a campaign to preserve the aqueduct in 1992, an effort underwritten in large part by Caja Madrid, one of Spain's leading banks.

Although many of the aqueduct's structural issues were addressed at that time—primarily in above ground areas—nothing was done to halt the erosion of the masonry blocks themselves, which have continued to deteriorate at an alarming rate due to pollution and exposure to the elements. More disturbing, however, it seemed that several interventions were carried out that actually exacerbated rather than remedied the aqueduct's problems, including the use of inappropriate restoration materials and the installation of a lead channel that retains water, the latter leading to biological growth. In addition, few if any measures were taken to protect the subsurface portions of the water system; the location and conditions of some areas remain undocumented to this day. This lack of documentation and public awareness of the system, some say, was to blame for the accidental destruction of a subterranean portion of the aqueduct during construction of a new high-speed rail line between the city and the Sierra de Guadarrama in 2000–2001.





EXISTING CONDITIONS OF THE AQUEDUCT, CLOCKWISE FROM TOP LEFT, INCLUDE VEGETATION GROWTH IN MASONRY JOINTS, EROSION OF INDIVIDUAL ASHLAR BLOCKS, RETENTION OF MOISTURE DUE TO THE INSTALLATION OF A LEAD CHANNEL IN THE 1990S, AND INAPPROPRIATE PATCHES MADE WITH BRICKS AND OTHER UNSYMPATHETIC MATERIALS DURING EARLIER RESTORATIONS.

The precarious state of preservation of the aqueduct prompted the Municipality of Segovia to nominate the Roman wonder for inclusion on WMF's 2006 list of 100 Most Endangered Sites, a move that angered the regional government, which had carried out the controversial 1990s restoration work and is ultimately responsible for the historic resources for the region.

Following WMF's Watch listing and acting upon recommendations put forth by UNESCO, American Express stepped forward with a grant of \$125,000 to underwrite the development of a comprehensive conservation plan for the site and its environs. The plan will be drafted by an international team—among them noted structural engineer Giorgio Croci, conservator Jose Delgado, and archaeologist Isabel Roda—that would be coordinated by Jose Maria Ballester and Pablo Longoria of WMF's Spanish office working in concert with the municipality and Spain's Ministry of Culture. Beyond endorsing the plan, the ministry agreed to up the funds needed to maintain the site from €18,000—which had been provided by the Caja de Segovia bank—to €120,000 annually, thereby helping the cash-strapped municipality to care for the aqueduct.

Slated for completion later this year, the conservation plan calls for the archaeological and geological documentation of the entire water system and the creation of a GIS-based database for the management of the site; the immediate removal of the lead channel installed during the 1990s restoration; and the limiting of vehicular access around the aqueduct. Conservation of the site, however, will take nearly a decade to complete. Once done, maintenance of this great engineering marvel will require that all of the agencies responsible for it continue to work together, politics aside. An agreement to this effect is currently on the table. ■

Mural Masters



A SCAFFOLDING ENABLES CONSERVATORS TO CARRY OUT THE CAREFUL WORK OF STABILIZING NINTH-CENTURY MURALS WITHIN MOGAO CAVE 85.

Fresco and mural conservation specialists are a brave, frighteningly knowledgeable, and slightly geeky elite, traveling the world studying painted walls and trying to keep maximum amounts of original pigment adhering. Over the past decade, the arsenal of high-tech tools and chemicals for analysis and repair has expanded greatly. But this roving band and the institutions they work for must still rely on venerable scientific methods: they hypothesize, get second and third opinions, and test in labs again and again before selecting treatment protocols. And the experts must sometimes concoct gentle restoration potions with ingredients as primeval as egg whites. Here are three pioneers who are working to advance the state of the art, whether in Chinese mud-walled caves, Italian cathedrals' groin vaults, or Brooklyn laboratories.

NEVILLE AGNEW

Principal project specialist, Getty Conservation Institute, Los Angeles, California. Mural territory: Buddhist cave temples cut into rock cliffs at Mogao, in northwest China

For two decades Neville Agnew has visited China at least annually, orchestrating conservation of cave murals up to 1,600 years old. Buddhist monks and their wealthy patrons commissioned the paintings from master craftsmen; the dried-mud walls in some 490 grottoes depict scenes from the Buddhist canon and Chinese daily life, and often portray the benefactors themselves. Agnew and his international colleagues have collaborated with scholars at Dunhuang Academy, which oversees the site as a research center and increas-

ingly popular tourist attraction. The teams just finished a showpiece project, Cave 85, which was painted in the 860s with mineral pigments that retain their bold green and brick-red palette. Parts of the murals have separated from the rock, eroded, flaked, or fallen due to salt infiltration, sandstorms, floods, and earthquakes.

To stabilize what remains and simulate original plaster, the Getty cohort and fellow scientists tested 80 grout formulas. "We were looking for the optimal combination of fluidity, quick set time, light weight, durability, adhesion, and water resistance," Agnew explains. The winner? A mixture of Scotchlite K1 glass microspheres, pumice, and whipped egg whites. "We moved very slowly before we agreed on a treatment approach," Agnew adds. "We hear all the time, 'what's the newest material, where's the magic bullet?' But hastening to intervene can be a catastrophe, and sometimes doing nothing is best—although that wasn't the case at all, as it turned out, for Cave 85."

In collaboration with the Chinese government, he has helped draw up formal national guidelines called "Principles for the Conservation of Heritage Sites in China." The thick document, he says, "will have bite and impact and wide dissemination." The Getty is meanwhile studying how many tourists Mogao can handle: "It's a complicated matter, involving studies of microclimates and visitor routing and quality of experience," Agnew reports. The research will shape a management plan that could prove a role model for other Chinese sites.

The Getty is also involved in another temple project at Mogao, Cave 260, which will serve as a training ground for master's-degree candidates studying wall-painting conservation at Chinese universities and London's Courtauld Institute. "Cave 260 has different problems from Cave 85," Agnew says. "It's two or three hundred years older, and it burned at some point, so there's a great deal of soot to deal with. And we don't know yet if the pigments and binding media there are the same as the ones at Cave 85. There'll be generations of arduous work to be done at Mogao."

MARINE COTTE

Post-doctoral researcher, European Synchrotron Radiation Facility, Grenoble, France. Mural territory: Pompeii and environs, Bamiyan caves in central Afghanistan

Paint flecks with the circumference of a hair shaft are Marine Cotte's stock in trade. She works at the European Synchrotron Radiation Facility, a donut-shaped airport-size lab in Grenoble, which can shoot high-intensity x-ray beamlines at microscopic samples. The resulting data indicates not only all the piece's ingredients but also how those compounds are molecularly bonded. Physicians, physicists, chemists, biologists, and forensic scientists, among other professions, reserve time for studies at the ESRF. Cotte specializes in assisting archaeologists.

In 2005, she collaborated with an Italian team to train ESRF machines on fragments of frescoes from the Villa Sora, a ruined first-century home near Pompeii. Cinnabar red pigments there have blackened, and conservators long believed that sunlight was causing the sulfide to morph into a crystal called metacinnabar. But Cotte's discoveries defied that common wisdom. The ESRF, she explains, "found no metacinnabar at all. Instead there was chlorine. It was difficult to detect in the mixture of many compounds, but it was definitely there. We found it in the blackened degradation layer, which is about 10% as thick as a strand of hair." (For details

of the results, see an article in the journal *Analytical Chemistry*, downloadable at <http://pubs.acs.org/cgi-bin/sample.cgi/ancham/2006/78/121/pdf/a0612224.pdf>.)

She's now examining cinnabar-dyed fresco flecks from various Roman archaeological sites and from museum collections of wall fragments. "I want to see if the proximity of the Mediterranean brought in the chlorine to the Villa Sora, or if chlorine is found in samples exposed

to various atmospheric conditions," she notes. "I'm looking for general tendencies, to see if we need to adapt treatments to the presence of chlorine."

Scrapings of mural paint from the Bamiyan Buddhist temple caves in Afghanistan are also piled on her desk lately, for studies led by a Japanese team and partly funded by UNESCO. "We're trying to understand the painting techniques and some degradation problems there," she says. "We don't know yet which pigments were used, and how they were mixed." That is, x-rays from a state-of-the-art accelerator in France will help unravel the mysteries of domed grottoes full of seventh-century Buddha portraits: just spared from the Taliban.



RED PIGMENTS HAVE TURNED BLACK IN A DEGRADED WALL PAINTING, LEFT, IN THE VILLA DI POPPEA, OPLONTIS, ITALY. ELEONORA DEL FEDERICO AND ALEXEJ JERSCHOW AND THEIR STUDENTS, BELOW, USE A RECENTLY ACQUIRED NMR TO ANALYZE ULTRAMARINE PIGMENTS.



ELEONORA DEL FEDERICO

Associate professor of chemistry at Pratt Institute, Brooklyn, NY, and Andrew W. Mellon Conservation Fellow at the Metropolitan Museum of Art, New York, NY
Mural territory: Anywhere in Europe with murals painted blue in the Middle Ages or Renaissance

Eleonora Del Federico cooks up blue fresco pigments based on centuries-old recipes, laced with

powdered lapis (for ultramarine tones), azurite, or copper. She paints some samples on plaster, sprinkles salt here and there, and then stores the swatches in sealed, humidified lab chambers. After a week or two, the ultramarine tends to fade to yellowish gray, and the azurite and copper turn green. With teams co-led by Alexej Jerschow, a chemistry professor at New York University, Del Federico and Pratt fine arts professor Licio Isolani are figuring out why the paints fail and how to arrest or undo the damage.

In the conservation trade, the lapis decay is called "ultramarine sickness." With nuclear magnetic resonance (NMR) analysis, Del Federico explains, "we discovered that in ultramarine, there are cages of aluminum and silicon atoms that hold sulfur molecules. Humidity and the alkalinity in plaster combine to break down those cages, and the sulfur molecules aren't stable once they're loose." Ultramarine losses are particularly devastating in religious murals: the color was popular for robes worn by Jesus and the Virgin Mary (it also appears in the Sistine Chapel's sky). "We're looking into how to protect the sulfur cages," Del Federico says. "There's also a remote chance we'll find ways to regenerate the cages and trap the sulfur back inside."

With funds from the Alfred P. Sloan Foundation, her lab has just acquired a portable NMR machine, which fits into a carry-on-size suitcase. "We're figuring out which would be the best sites to try it out," she says. "It's all nondestructive testing, and it'll be able to tell us about the walls' pore size and salt and water content. My students can't wait to give it a field test." And they won't just train it on blue sections, she adds. At the Basilica of Assisi, where murals were executed by artists as prominent as Giotto and Cimabue, "we're also seeing the lead-white pigment turning black. No one knows yet what the chemical mechanisms are. In five or ten years, I'm hoping we can at least slow down these processes if not reverse them, before these images disappear."

INSIDER'S GUIDE

VISITING WMF SITES FEATURED IN THIS ISSUE

St. George's Hall, Liverpool, England

GETTING THERE

Located on William Brown Street, Liverpool L1 1JJ, the Hall is a short walk from Liverpool Lime Street train station.

Official re-opening will take place on St George's Day, April 23, 2007. Tours of the hall will be available Monday-Saturday, but are



subject to availability. All bookings must be done via Liverpool Direct, tel 44-0151-233 2008. See www.visitliverpool.com for more information.

MORE ABOUT IT

A good overview of the city's architecture can be found in the Liverpool edition of *Pevsner's Architectural Guides* by Joseph Sharples, while *Walks Through History: Liverpool*, by David Lewis describes many tours exploring the rich and varied heritage on offer. A publication which gives a description and history of the whole city is *Liverpool: Maritime Mercantile City*, by the Liverpool World Heritage Steering Group.

WHILE IN LIVERPOOL

The 2008 European Capital of Culture has a treasure trove of sights to explore—possessing more listed buildings than any city in the UK outside London. The Walker Art Gallery, the Beatles Story, Tate Liverpool, and the Anglican Cathedral are among many of the sites well worth a visit. You could also combine your visit with a trip to Manchester (less than an hour's drive away) and visit the magnificent Monastery of St Francis and Gorton, built by E.W.Pugin in the 1860s and a current project of WMF in Britain,

San Juan Bautista, Huaru, Peru

GETTING THERE

Some 40 kilometers south of Cuzco, Huaru can be reached by car or bus. For the latter, a minibus bound for Urco departs from in front of the regional hospital on Avenida de la Cultura in Cuzco every 15 minutes. For those who wish to stay in Huaru, there is an inn in an old house some 200 meters from Plaza de Armas. A brief, but informative, bit of travel information on Huaru itself—in French oddly enough—can be found at www.incaro.com

MORE ABOUT IT

A number of books have been published on the paintings—all in Spanish—the most comprehensive being *La Pintura Mural Andina: Siglos XVI-XIX*, by Pablo Macera (Lima, 1993). One of the best guide books on the traveling throughout the region, including the Inca trail, is the *Lonely Planet's Peru*.

WHILE IN HUARO & THE CUZCO AREA

Cuzco, ancient capital of the Inca Empire, is one of the most stunning cities in Latin America—with an exotic blend of Prehispanic and Colonial architecture. With daily flights from Lima, it is the ideal jumpoff point for excursions on the Inca trail to the north and south to Huaru and other painted churches. While in Huaru, do visit the local petroglyph museum. On view are a number of stones carved with ancient symbols—many of which were used to construct the foundation of San Juan Bautista.

Battersea Power Station, London, England

GETTING THERE

Battersea Power Station is at present closed to the public, although tours can be arranged at the owner's

discretion. A closer view of the site can be gained from traveling to Battersea Park Train Station, which is five minutes from Victoria Mainline Station.

MORE ABOUT IT

While Battersea has served as a backdrop for a number of films, including Alfred Hitchcock's *Sabotage* (1936) and Ian McKellen and Richard Loncraine's 1995 *Richard III*, surprisingly little has been written on the structure outside media coverage of the preservation debate. There is an interesting essay on the structure in Anthony Sutcliffe's recently released *London: An Architectural History* (see review page 46). To keep up with the preservation battle see www.batterseapowerstation.org.uk

WHILE IN LONDON

WMF's restoration of St. George's Bloomsbury is complete and this Hawksmoor church is open to the public at lunch times and longer at weekends. The church is a stone's throw from the British Museum, on Bloomsbury Way and in between Tottenham Court Road and Holborn Tube Stations.

Dampier Rock Art Site, Burrup Peninsula, Australia

GETTING THERE

The Burrup Peninsula and the Dampier Archipelago is some 20 kilometers north of the town of Karratha, which can be reached by plane via a two-hour flight from Perth or by driving 1,500 kilometers from Perth north to Karratha and on to the central Pilbara coast to Dampier. From Dampier look for the turnoff to the Burrup Peninsula.

WHEN TO VISIT

Tropical, semi-desert climate which reaches 45 degrees centigrade in summer. Best times to visit are May, June, July when median day temperature is 26-28 degrees C.

WHILE ON THE PILBARA COAST

Among the favored places in the area are Hearson Cove, a sheltered picnic and swimming spot. From there, take an unmarked turnoff on the left 1.1 kilometers out of Hearson's Cove to Deep Gorge where there is another impressive concentration of rock art. Other sites on the Burrup include Withnell and Conzinc bays, which boast spectacular scenery and rock formations but can only be reached by four-wheel-drive vehicles.

Segovia Aqueduct, Segovia, Spain

GETTING THERE

Declared a World Heritage City by UNESCO in 1985, Segovia is just 60 kilometers northwest of Madrid, and can be easily reached by bus and train. The Roman aqueduct—which appeared on all coins minted in the city from 1455 to 1864—is Segovia's most distinctive structure, its water source located in Río Frio, 14 kilometers north of town.

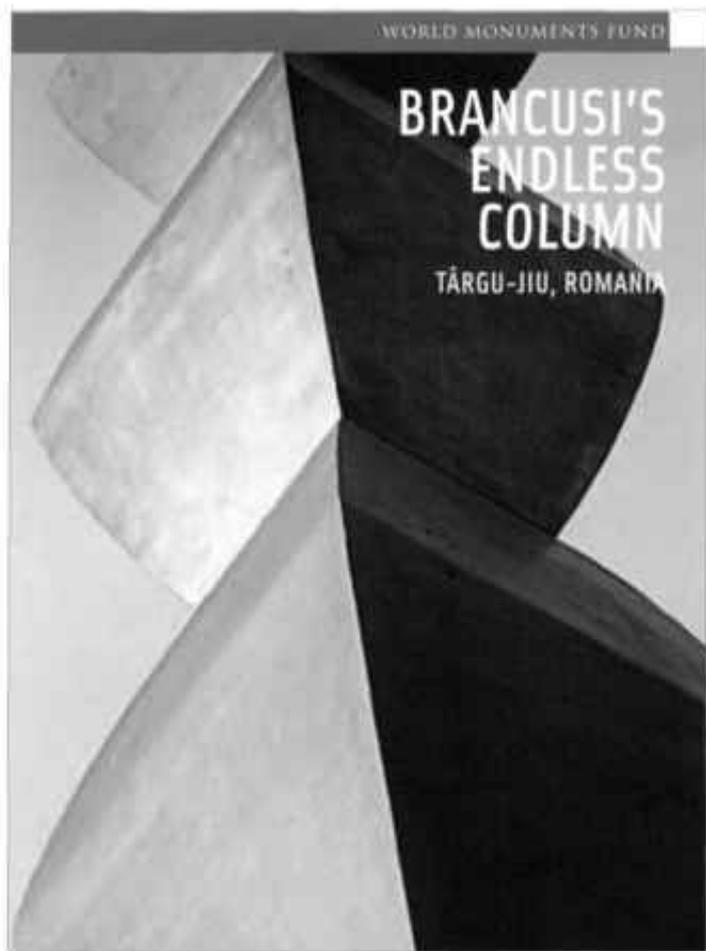
MORE ABOUT IT

For information on Segovia and its criteria for listing as a World Heritage City, see whc.unesco.org/ and the website of the government of Castilla y Leon (in Spanish) www.jcyles/



WHILE IN SEGOVIA

Among the city's highlights are the Alcázar Castle, where Queen Isabella promised Columbus backing for his voyages to the New World, and its sixteenth-century cathedral, the tallest structure in Segovia. The city's mint—built in 1583 and equipped with the day's most modern waterwheel-driven minting technology—is believed to be the world's oldest, still-standing, industrial manufacturing plant.



BRANCUSI'S ENDLESS COLUMN TÂRGU-JIU, ROMANIA

Essays by Alexandra Paragoris, Sorana Gorjan, Richard Newton,
Mihai Radu, and William Tucker

Edited by Ernest Beck

The *Endless Column* Complex by famed Romanian sculptor Constantin Brancusi has been hailed as one of the great works of 20th-century open-air art. Erected in a small town in Romania in 1934, it is composed of the 30-meter-high *Endless Column* and two stone monuments, the *Gate of the Kiss* and the *Table of Silence*. This beautifully illustrated volume celebrates the history of this remarkable artwork, and tells the story of the recent restoration, landscaping, and presentation carried out by the World Monuments Fund. Illustrated with rare archive and newly commissioned images, this short volume is a stunning and authoritative guide to a unique monument.

To be published in June 2007, price \$14.95 (£8.95).
Paperback, 80 pages, 278 x 204mm. ISBN: 978-1-85759-436-2.

For further details, contact Scala Publishers,
10 Northburgh St, London EC1V 0AT, UK.
Email: jmckinley@scalapublishers.com. www.scalapublishers.com

EX LIBRIS

SELECTIONS FROM THE WMF BOOKSHELF

TUNISIAN MOSAICS: Treasures from Roman Africa

BY AÏCHA BEN ABED • GETTY PUBLICATIONS • \$29.95 • 138 PP.

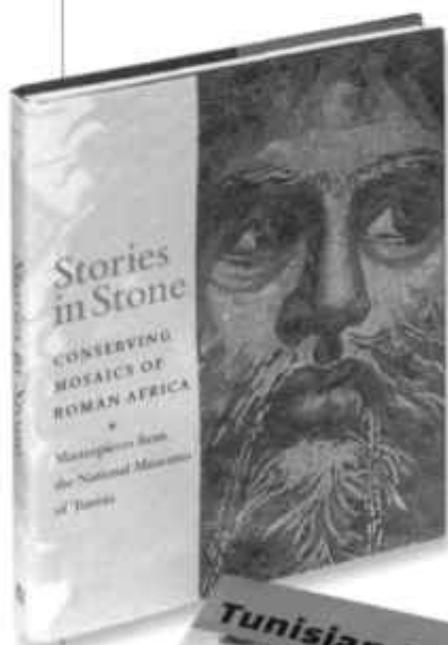
STORIES IN STONE: Conserving Mosaics of Roman Africa

EDITED BY AÏCHA BEN ABED • GETTY PUBLICATIONS • \$75 • 188 PP.

When Pax Romana prevailed in what's now Tunisia, homeowners commissioned mosaic floors depicting all their favorite hobbies: banqueting, hunting, fishing, horseback riding, reading poetry, putting on makeup, ordering around servants, or watching gladiator games.

The images were sometimes set in floral grids, like giant carpets. When the houses fell into ruins, debris protected the floors from the elements. But nineteenth-century archaeologists and foreign soldiers nonetheless thought that the more vividly pictorial mosaics, at least, would be better off in museums. Without documenting sites, excavators cut scenes into portable panels, pried off the lime mortar bedding, reset the tiles in plaster and jute, and carted them away. The simpler floral and geometric examples, meanwhile, were left in situ, and sometimes misguidedly patched with cement. *Tunisian Mosaics*, by Aïcha Ben Abed, the director of monuments and sites at Tunisia's National Institute of Cultural Heritage, lucidly explains how tile-pattern fashions evolved in the Roman colonies and what treatment standards are now enforced. Thanks partly to Getty funding, crews are being trained to apply gentle cleansers, stabilize lacunae, inject reversible grout, and keep tourists' feet off the floors. Aïcha Ben Abed has also edited a companion volume,

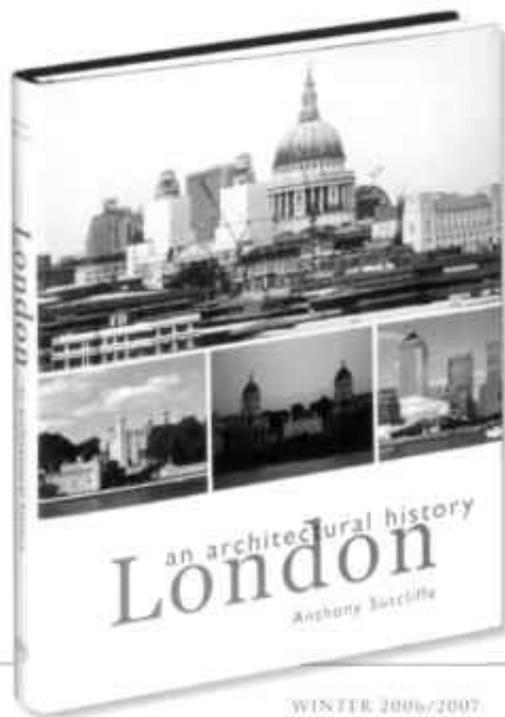
Stories in Stone. (Both books accompany a mosaics show at the Getty, through April 30.) With eight essays by scholars from Tunisia or the Getty, *Stories in Stone* delves into how North Africans under Roman rule expressed their independence through mosaic. Rich patrons craved realistic designs with regional flavor, for instance depicting quintessentially Tunisian fishing tools like basket traps, floating gill nets, and *tunnoscopeia* (tuna lookout shelters). African takes on mythology are also visible in the floors; sea-related gods and goddesses were favorites, including Venus, Neptune, Oceanus, Nereid, and the Tritons. And by the sixth century, Christian Tunisians were funding religious mosaics for basilicas—in fact, nowhere else in the former Roman colonies were mosaics so popular on baptismal fonts and tombs. The authors also explore conservation attempts over the centuries. Modern methods have pros and cons; temporary shelters can worsen condensation, while reburial can allow plants to root in the stone tesserae.

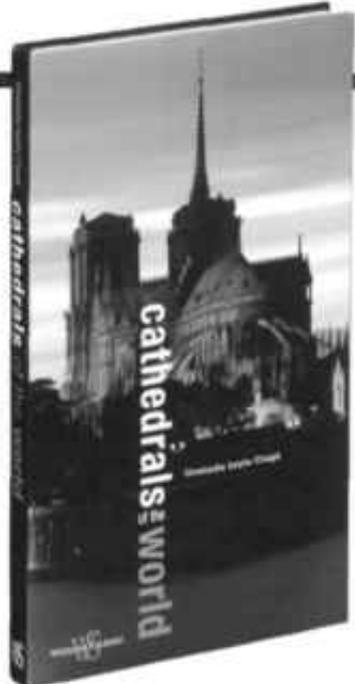


LONDON: An Architectural History

BY ANTHONY SUTCLIFFE • YALE UNIVERSITY PRESS • \$60 • 249 PP.

First-time visitors to London sometimes have a tough time getting a visual grip on the city, given its eclectic architecture, patchwork of formerly independent villages, and lack of grand boulevards. Anthony Sutcliffe, a historian at the universities of Leicester and Nottingham, has managed to find and explain some common streetscape threads. London real estate still mostly belongs to aristocrats, and the long-term leases keep down land prices as well as building heights; for most developers, a site they don't own isn't worth a tall building. The government has never seized enough property to lay down Parisian-style avenues or build palaces and gardens at the scale of the Louvre or Versailles. And until clean-air regulations were imposed in the 1950s, London suffered notoriously from acidic pollution; only a few kinds of brick and hard-to-carve stone could withstand the atmosphere, which explains the prevailing drab façade palette and lack of balconies or other projecting ornament. Sutcliffe's lively prose chronicles the metamorphosis of a first-century Roman outpost into an Elizabethan "chronic fire trap," a pious seventeenth-century array of church domes and spires, a Victorian imperial capital, and a modern financial hub. The author analyzes building types (including theaters, markets, prisons, and of course pubs) and supplies mini-bios of architects like Christopher Wren, Nicholas Hawksmoor, Inigo Jones, and John Nash. The book is also rich in aerial views that help readers make sense of the steeples and office towers punctuating the muddled street patterns.





CATHEDRALS OF THE WORLD

BY GRAZIELLA LEYLA CIAGÀ • WHITE STAR • \$19.95 • 216 PP.

What have Catholic, Anglican, Byzantine, Russian Orthodox, and nondenominational Christian congregations looked for in a cathedral since the 530s? Milan-based restoration architect Graziella Leyla Ciagà answers the question by examining 36 examples in 12 countries. Along with expected candidates like Notre Dame and St. Peter's, she includes off-the-beaten-path attractions like 1960s metal paraboloids in Japan designed by Kenzo Tange and the gilded 1810s domes of St. Isaac's in St. Petersburg. Ciagà's detailed technical descriptions allow readers to compare structural systems: the triple-shelled dome of St. Paul's in London, for instance, versus the quintet of domes on barrel arches at St. Mark's in Venice and the laminated-wood fish-scale roof panels on steel struts that Renzo Piano recently built near Naples. The book also serves as a kind of catalog of popular religious architectural ornament. Close-ups of sixth-century mosaics in Ravenna reveal individual wing feathers and hair strands on portraits of saints, while folk-inspired scrollwork courses through the Victorian wooden ceiling that Sir George Gilbert Scott added to the austere stone vaults of eleventh-century Ely Cathedral.

ABUNDANCE OF LIFE: Etruscan Wall Painting

BY STEPHAN STEINGRÄBER • GETTY PUBLICATIONS • \$125 • 328 PP.

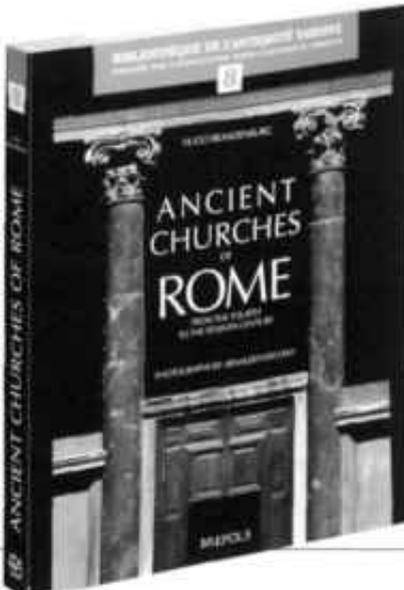
From the seventh to third centuries B.C.E., stone workers carved by candlelight or oil-lamp flame to scoop out hundreds of tombs for Etruscan aristocrats in sandstone or tufa cliffs northwest of Rome. Painters would descend into each new room to fresco the walls with scenes from mythology or the deceased's life, along with trompe-l'oeil architectural details (moldings, doors, pilasters, ceiling coffers). Archaeologists have been uncovering the colorful chambers and trying to decipher their iconography since 1699. The mural themes—hunting, banqueting, carousing, playing sports—are almost invariably cheerful. Only rarely, and only in the later tombs, do any corpses, mourners, or underworld demons make appearances. Somehow the Etruscans, even while their cities were falling under Roman rule, stayed optimistic and faithful to their belief in a joyful afterlife. Stephan Steingraber, a Rome-based Etruscologist, lays out how scholars have analyzed the tomb pictures over the past three centuries. He also compares the paintings to Etruscan artifacts and explains how conservators' policies have evolved. The frescoes used to be routinely, "rather barbarically," ripped out and moved to museums, but now are left in situ, behind glass doors that keep out tourists and maintain climate control. The book's near life-size photos, printed on rough-textured paper, are a superb substitute for actual visits to the fragile frescoes.



ANCIENT CHURCHES OF ROME FROM THE FOURTH TO THE SEVENTH CENTURY: The Dawn of Christian Architecture in the West

BY HUGO BRANDENBURG • BREPOL'S • \$145 • 336 PP.

Constantine the Great converted to Christianity with such zeal in the year 312 that he not only banned religious persecution in his realm, but dug deep into imperial coffers to finance widespread church construction. He cleared the first site for a basilica in Rome, tearing down barracks of soldiers who opposed him. Dozens of basilicas were soon built with imperial funds, while Constantine's wealthier subjects and the earliest popes started commissioning their own churches, especially at the graves of Christian martyrs. The builders salvaged marble columns and other construction materials (*spolia* is historians' official term for this booty) from older buildings. But usually they did not simply adapt existing structures into sacred space, with the famous exception of the Pantheon, which was Christianized in 608. Many of the new churches were located outside city walls—the converts didn't want to worship downtown, near what German archaeologist Hugo Brandenburg calls "pagan temples in slow decay." This lavishly illustrated volume analyzes intact, heavily altered, and long-razed churches with equal rigor. The author has pored through ecclesiastical archives, deciphered allegorical murals, researched the quarry origins of marble fragments in mosaics, and even looked at the latest dendrochronology studies of wood frames.



To purchase titles featured here, click on WMF's Amazon.com link on our website at www.wmf.org. Commissions on books purchased through our website support WMF field projects.

EXPEDITION: CROATIA

A part of the former communist state of Yugoslavia, the Republic of Croatia, or *Republika Hrvatska*, lies along the northeast coast of the Adriatic. It is a land well-endowed with historic sites, but is largely known throughout Europe for its natural assets, particularly the Dalmatian coast. For years, this stunning stretch of coastline has been a choice destination for tourists, lured there by its crystal-clear waters—Cousteau loved it—on-shore breezes, and hospitable ports of call nestled on its 1,000 plus islands.

The region's economy depended heavily on tourism dollars brought in by the Dalmatian Coast. That was until 1990, when fierce ethnic fighting in the western Balkans wreaked havoc on Croatia, resulting in a devastating civil war during 1991 and 1992. The area hardest hit was Dalmatia, especially the ancient towns of Zadar and Dubrovnik.

When calm returned to the country in the mid-1990s, WMF was asked to be part of a massive post-war reconstruction effort. The organization responded, launching projects to restore the heavily damaged Ducal Palace in Zadar—built between the thirteenth and nineteenth centuries—and repair the roof and library wing of the sixteenth-century Franciscan monastery in the walled city of Dubrovnik. WMF subsequently took on the restoration of the Temple of Jupiter within Diocletian's 1,700-year-old Palace at Split (see *ICON* Fall 2004).

As WMF's technical director, I recently made my third trip to Croatia, having managed the organization's Balkan portfolio since 1999. Aside from checking in on the progress we have made at these sites, I had come to launch a suite of new projects in the country, including a second phase of restoration within the Peristyle court at Diocletian's Palace—which will be carried out in partnership with the city of Split and launched with a grant from WMF sponsor American Express—and to initiate conservation work on the front entry façade of the baroque style Church of St. Blaise, a 2006 Watch site named in honor of the beloved patron saint of the city.

During my visit I was impressed by how much skilled restoration has been accomplished in Croatia over the past decade. This still little-known country is once again being rediscovered, regaining its economic legs, and restoring its rich heritage in the process. In fact, it is estimated that 95 percent of all that was destroyed during the war has been repaired.

As I settled into my flight home and began to pen this note, I recalled that the fountain pen was invented by a Croatian named Penkala in 1907 and that the neck tie that I just loosened originated in the seventeenth century as an accent to the Croatian military uniform, later adopted by the French as the *cravat*—a hybrid of the words *Croat* and *Hrvat*. Who knew?!
—MARK WEBER



FROM TOP: A VIEW OF DUBROVNIK AND ITS BEAUTIFUL HARBOR; REPRESENTATIVES FROM THE CITY OF SPLIT, AMERICAN EXPRESS, AND WMF ASSEMBLE IN THE PERISTYLE COURTYARD OF DIOCLETIAN'S PALACE TO CELEBRATE THE COMPLETION OF A FIRST PHASE OF RESTORATION; THE CHURCH OF ST. BLAISE IN DUBROVNIK, WHERE WMF IS LAUNCHING AN EFFORT TO RESTORE THE CARVED CENTRAL ENTRANCE BAY OF THE FRONT FACADE.



Where do WMF membership dollars go?



Every day, irreplaceable cultural and historical monuments are threatened by war, development, pollution, natural disaster, and neglect. Your membership support makes a difference. Nearly 90% of all membership donations go directly toward fieldwork and educational programs that have made WMF an international leader in architectural preservation for over 40 years.

Renew your membership today or join online at www.wmf.org.

Call 646-424-9594 for more information.

WORLD MONUMENTS FUND

GEHRY BEAUTY WITHOUT RULES

© 2002 Tiffany & Co. All rights reserved. Tiffany & Co. is a registered trademark of Tiffany & Co.

INTRODUCING THE FRANK GEHRY COLLECTION

TIFFANY & CO.