Ancient Wonder, Modern Challenge

AN UNCERTAIN FUTURE FOR THE GREAT WALL OF CHINA

Into the Maya Outback

NEWFOUND SITES ON THE USUMACINTA RIVER

A Conservatory Reborn

A SAN FRANCISCO LANDMARK BLOOMS AGAIN
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 help save them. American Express has committed $10 million over ten years to the Watch. For the past six years, American Express Publishing’s Travel + Leisure magazine has devoted a special section to the Watch, contributing ten 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.
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ON THE COVER
Built over two millennia, the Great Wall of China stretches across the landscape as far as the eye can see.
Photograph by William Lindesay
Focusing on Europe

On July 1, Bertrand du Vignaud, a longtime friend of WMF, was appointed president of WMF Europe, a new regional operating division charged with coordinating the work of WMF's active affiliate organizations in Britain, France, Portugal, and Spain. Bertrand, who leaves a senior position at Christie's to assume this new role, has been an active ally of WMF for more than 15 years. Over the past decade, he has helped build our presence in France, serving as both a WMF trustee and a member of the board of our French affiliate, which he has chaired since 1996.

Conservation of European architectural heritage has been a core activity since our founding in the 1960s, but the vast destruction wrought under communism in Central and Eastern Europe, the devastation of the Balkan conflict, and the losses that occur every day in the West because of inadequate funding continue to create a compelling agenda for WMF today.

At the same time, support for conservation in Europe is still woefully inadequate, in part because the tax incentives that encourage philanthropy in the United States are largely absent. In addition, the European Union has yet to adopt a policy that would spark a vibrant non-governmental sector. However, the recent generous commitment of matching funds from the Robert W. Wilson Challenge and a gift from the Estate of Paul Mellon have provided WMF with a unique opportunity to create new formulas for public-private partnerships that can leverage greater support for major European projects.

Our European affiliates—autonomous national associations working under local laws—are already undertaking important initiatives under public-private partnerships crafted with challenge funds from headquarters. These include the restoration of St. George's Bloomsbury in London, the Jerónimos Monastery in Lisbon, the St. Blas chapel of Toledo Cathedral in Spain, and the Marie Antoinette Theatre at Versailles. In addition to managing projects in their own regions, our affiliates have initiated projects with international and cross-affiliate dimensions, particularly WMF in Britain. WMF Europe, designed to be a vigorous regional initiative in continental Europe, will give us the capacity to bring desperately needed care and attention to many more sites. And we hope WMF Europe will serve as a model to be replicated as we carry our mission even farther afield, into other parts of the world.

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Few monuments on Earth are as famed as the Great Wall of China. Few know the age-old monument as intimately as William Lindesay, a British long-distance runner who first encountered the wall in 1986. Arriving in Beijing with little more than a pair of running shoes and a backpack, Lindesay was determined to become the first foreigner to run the entire length of the wall's surviving remains—more than 2,400 kilometers' worth—from its western terminus at Jiayuguan, deep in Gansu Province, to Shanhaiguan on the Bohai Sea. Little did Lindesay know that more than a decade later, he would become one of the foremost authorities on the Great Wall and one of the world's most vocal advocates for its preservation. "I was most concerned about the condition of the Wild Wall, that portion outside Beijing that has suffered the most from neglect, vandalism, exploitation, and commercial development," Lindesay told ICON. "The Great Wall is undoubtedly the world's greatest work of environmental art, and the one feature above all others that defines China. Yet it has endured far more than the effects of old age. Vast sections of the wall are covered with graffiti, while other stretches have been viewed as little more than a source of raw building materials. Surviving sections have all too often fallen victim to commercial exploitation and inappropriate reconstruction."

Today, the future looks a little brighter for the Great Wall, thanks to the tireless campaigns of Lindesay and others, including Dong Yaohui of the China Great Wall Society (see page 28). Their efforts have begun to pay off. Just recently, Beijing officials adopted long-overdue legislation to protect the wall—albeit only the stretch just outside the capital city—for future generations.

Angela M.H. Schuster
EDITOR
HIRAM BINGHAM DISCOVERED MACHU PICCHU—NOT!

Long credited with discovering the long-lost Inca capital of Machu Picchu on July 24, 1911, Yale archaeologist Hiram Bingham was not, in fact, the first Westerner to visit the Peruvian site according to a recent report. The famed site, built in a saddle between two Andean peaks overlooking the Urubamba River, and its diminutive counterpart, Huayna Picchu, perched on an adjacent hilltop, are clearly marked on a map of the region drawn in 1874, say Mariana Pease de Moulde of the National Institute for Culture in Lima and Jorge Flores Ochoa of the National University San Antonio Abad in Cuzco. According to the duo, the map was included in a book, Informe al Gobierno del Perú sobre una expedición a los valles de Paucartambo, written by Herman Gohring and published in 1877, 34 years before Bingham's expedition to the fourteenth-century Inca fortress, 80 kilometers northwest of Cuzco. "What is so strange," Pease told ICON, "is that, until now, no one has paid any attention to the map."

"Machu Picchu is mentioned by name in Spanish documents from the time of the conquest," she says, "however, the first European thought to have actually seen the site first-hand was a French nobleman, Eugene de Sartiges (1809–1892), who spied it from a distance in 1835." Bingham, whose widely publicized expedition was sponsored by Yale and the National Geographic Society, may have found the site using de Sartiges' notes. "Bingham was no doubt the first to scientifically investigate the site," she adds, "but he also stripped it of more than 5,000 objects, which are currently in the collection of Yale University's Peabody Museum."

Over the past century, Machu Picchu has attracted its share of attention. In recent years, however, the site has made headlines not for its extraordinary architecture, but for its imperiled state, brought on by uncontrolled tourism. Developers planned to build a cable car connecting the site, which is located some 2,430 meters above sealevel, with the village of Aguas Calientes on the Urubamba. Although that plan appears to have been scrapped, the site, which was included on WMF's 2000 list of the 100 Most Endangered Sites, has continued to suffer from chronic mismanagement. But this may soon change. At press time, the World Bank, in partnership with the Finnish government and the government of Peru, was working to develop and underwrite a master-plan not only for Machu Picchu, but for other sites along the Inca trail and the modern towns in their shadows. "The whole region is in need of financial and technical assistance," said Ephim Schluger of the World Bank, stressing that education was the key to preservation. According to Schluger, the plan, known as the Vilcanota Rehabilitation Project, will address a number of urban development issues, including sewage treatment and proper site interpretation. "A lack of visitor facilities and poor signage and tourism management have taken their toll on the whole of the Inca trail," he says. "We hope by working with the local people, we can ensure the survival of the site in the centuries to come, while addressing the social concerns and quality-of-life issues of those who care for one of the world's great archaeological treasures." Machu Picchu was inscribed on UNESCO's World Heritage List in December 1983. —AMHS
IRAQ SITE UPDATE

Until recently, very little was known about the current conditions of Iraq's archaeological sites, which have been difficult to assess given the ongoing conflict in the country. In May, a fact-finding mission, organized by UNESCO, was dispatched to Baghdad, but the participants were unable to leave the city. In the weeks that followed, however, a team organized by the National Geographic Society, which included Henry Wright of the University of Michigan and McGuire Gibson of the University of Chicago, was able to visit a number of the sites in the company of American troops.

According to Gibson, the worst looting is taking place in southern Iraq, particularly at the 5,000-year-old Sumerian sites of Umma, Isin, and Adab. At Umma, Gibson witnessed some 200 looters at work. At Isin, he saw perhaps as many as 300. The team was relieved to discover that many of Iraq's most important sites seem not to have sustained damage or suffered systematic looting during the recent conflict. Herewith is a brief report on the current conditions at the most important of Iraq's more than 10,000 sites, however, at press time the situation was still in flux:

ADAB: Severe damage, looters at work
ASHUR: No damage noted
BABYLON: No damage noted, museum looted
BAD-TIBIRA: Recent looting
CTESIPHON: Children climbing on roof
DAHAILEH: Pocked with looters' pits
ERIK: Attempted looting, no apparent losses
GIRSU: Minor recent looting
Hatra: A recent loss is the head of a figure
ISB: Severe damage, looters at work
KHORSABAD: Minor damage from military trenches
LAGASH: No damage
LARSA: Heavily plundered

NIMRUD: Two reliefs taken, minor damage
Nineveh: Lack of maintenance, reliefs in two galleries vandalized, looters' pits
NIPPUR: A few looters' pits, but little damage
Tell Afar: Damage by extension of fields and buildings; Coalition forces may now extend the Tell Afar airfield
Tell Billa: Site of a former Iraqi army camp now razed
Tell Harmel: No damage
Tell Mohammed: No damage, pillbox built by Iraqi troops
Tell Ramah: No damage, nearby prehistoric village of Qirmiz Dere damaged by bulldozing and to a lesser extent by military action

TELL SHMOED: Signs of recent looting
TEPE GAWRA: Olive orchard planted in last five years could destroy evidence of a lower town
UBAI: No recent damage to main site, nearby early historic village pockled with looters' pits
UMMA AL-AQARIB: Looting at work
UMMA AL-HAFREYAT: Riddled with looters' trenches
UMMA: Severe damage, looters at work, landscape devastated. Early Dynastic cemetery being plundered
UR: No damage, military foxholes
Uruk: No damage

BEIJING ENACTS FIRST LAWS TO PROTECT THE GREAT WALL

Legal measures to protect the Great Wall, China's most famous monument, have just been signed into law, according to a Beijing Times report. Built between the fifth century B.C. and the sixteenth century A.D. to protect China from nomadic invaders from the north, the Great Wall has been in dire need of protection, having suffered not only the effects of time, but degradation wrought by uncontrolled tourism, development, and outright vandalism.

According to the Beijing Times, no new development will be permitted within 500 meters of the wall, while commercial activities within 3 kilometers of it must undergo a special approval process. The long-overdue legislation bans carving, painting, or plundering stones or bricks from the wall, and prohibits merchants from setting up shop on it. The law also restricts hiking and climbing along unrestored sections. Authorization will be required for television and movie productions, and other large-scale events using the wall. The report said violators will be punished, but provided no details. The law at present only protects the wall in the Beijing area.

—AMHS
Lascaux Imperiled?

Though the magnificent Ice Age paintings at Lascaux have survived for more than 17,000 years, they now face an uncertain future as conservators battle fierce fungi that have colonized the cave, according to a report in the April edition of the French science journal, La Recherche. Discovered in 1940, the multi-chambered cave at Lascaux in the Dordogne region of southern France is considered by many to be the most important rock art site in the world, boasting some 600 paintings of aurochs (wild cattle), horses, deer, and enigmatic figures, and nearly 1,500 fine engravings, primarily of horses.

In the decade following the discovery of the paintings, the cave was cleared of ancient sediments in order to accommodate an ever-increasing number of visitors. Within a few years, however, the popularity of the cave began to take a toll on the renderings, which contracted a "green sickness" consisting of a proliferation of algae, and a "white sickness" brought on by crystal growth. Both were caused by the effects of visitor breath and body heat on the grotto's once-stable climate. Lascaux was closed to tourists in 1963. Conservators were able to reverse the effects of the green sickness and arrest the development of the white, but to ensure the survival of the art, the number of visitors had to be drastically reduced. As compensation, a facsimile, Lascaux II, was opened nearby in 1983.

Between 1999 and 2001, the original cave was closed to all visitors to permit the replacement of its aging electrical and climate-control systems. Unfortunately, it would appear that those who carried out the work may have failed to wear the necessary sterile boots, introducing bacteria and fungi into the cave. These are now proliferating and approaching the art. Although measures are being taken to combat the infestation, the micro-organisms are developing a resistance to the fungicides and antibiotics being applied, and are at best being controlled rather than eradicated. The situation has been compounded further by bureaucratic problems and institutional infighting. Some specialists doubt that it will ever be possible to resume visits by even the smallest numbers of people. Others, including some of those in charge of the cave's conservation, are far more optimistic, but even they point out that in the 1960s, it took seven years for the problem to be solved. —Paul G. Bahn

A Temple Reborn
Conserving Preah Khan, Angkor, Cambodia

The decade-long stabilization of Angkor's famed twelfth-century temple complex of Preah Khan is the focus of WMF's fall exhibition. On view will be a selection of photographs and computer reconstructions that chronicle the transformation of the ancient center of Buddhist learning from a jungle-cloaked ruin to one of the most stunningly preserved temples at the one-time seat of the Khmer Empire.

September 18, 2003—January 7, 2004
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Rendering 17,000 Years Ago, the Paintings of Horses and Aurochs at Lascaux May Vanish, Victims of Human Contamination.
HISTORIC LOWER MANHATTAN: A REPRIEVE?

While much of the public battle over the rebuilding of Lower Manhattan in the wake of the terrorist attacks on September 11, 2001 has focused on what should be built on Ground Zero, the preservation community has mounted a major campaign to keep historic buildings of the area from being swept away in the massive reconstruction effort. Spearheaded by the Lower Manhattan Emergency Preservation Fund (LMEPF)—a coalition of local, state, national, and international preservation advocates, including WMF—the campaign has focused media attention on a number of architectural gems, including the Corbin Building (1888-1889), cited as an excellent example of an early skyscraper erected during the first major wave of high-rise office construction in the city.

Located on the northeast corner of Broadway and John Street, the Corbin Building had been slated for demolition to clear the way for construction of a new, $750-million, state-of-the-art transit hub. Cries from the preservation community and the media just may have been heard by those charged with redevelopment. Architects now competing for the design of the hub are being encouraged by the Metropolitan Transportation Authority to include the Corbin Building in their design proposals.

Ken Lustbader, spokesman for LMEPF, said, “The possible demolition of the Corbin Building exemplifies the importance of preserving Lower Manhattan’s historic resources. In one square mile, there are hundreds of older buildings that contribute to the area’s unique historic character and can be incorporated into the current revitalization efforts.” Lustbader added, “Our goal is to alert the public, city officials, and key decision makers that these buildings are at risk and can be made part of the solution in rebuilding Lower Manhattan.”

—Henry Tzu Ng

KATHMANDU VALLEY AND FOUR OTHER SITES ADDED TO LIST OF WORLD HERITAGE IN DANGER

Located at the crossroads of some of Asia’s greatest civilizations, Nepal’s famed Kathmandu Valley is one of the latest sites to be added to UNESCO’s List of World Heritage in Danger. Among the valley’s 130 Hindu and Buddhist monuments are pilgrimage centers, temples, shrines, bathing sites, and gardens. The exceptional architectural treasures of the royal cities Kathmandu, Patan, and Bhaktapur are gradually disappearing as a result of uncontrolled urban development. The Kathmandu Valley was inscribed on UNESCO’s World Heritage List in 1979; two of its sites—the thirteenth-century monastery of Itum Baha and the eighteenth-to-nineteenth-century Teku Thapatali Monument Zone—are on WMF’s 2002 list of the 100 Most Endangered Sites.

In addition to the Kathmandu Valley, four other sites were recently added to the list: the 1,500-year-old archaeological remains of the Bamiyan Valley, Afghanistan, an important Buddhist center on the Silk Road; the Walled City of Baku, Azerbaijan, an outstanding and rare example of an historic urban architectural ensemble that reflects Zoroastrian, Sassanian, Arabic, Persian, Shirvani, Ottoman, and Russian cultures; the third-millennium B.C. city of Ashur, Iraq, first capital of the Assyrian Empire; and Comoé National Park, Côte d’Ivoire, one of the largest protected areas in West Africa. Today, 35 sites are on the List of World Heritage in Danger. For the complete list and updates on the conditions of these sites, see http://whc.unesco.org/danglist.htm.
More than 1,200 sites of historical and archaeological importance that once lined the middle reaches of China's Yangtze River have vanished in the wake of rising floodwaters, following completion of the second phase of construction of the Three Gorges Dam. Between June 1 and June 15, a 603-kilometer-long reservoir extending west behind the dam at Sandouping in Hubei Province was filled to a height of 135 meters. Upon completion of the hydroelectric dam project in 2006, the reservoir will be filled to a depth of 165 meters and in 2009, will rise to 175 meters.

Among the flooded sites are Fengdu in Sichuan, the oldest of the Three Gorges sites, where 7,000-year-old remains of the Yuxi culture were found; Lijiaba, a site west of Fengjie in Yuzhang county, Sichuan, with exceptionally deep strata spanning the Shang through Qing dynastic periods; Xiaotianxi in Fuling, Sichuan, the Warring States-Han royal cemetery of Ba; and the alleged home of China's most famous poet, Qu Yuan at Guizhou City near Zigui, just upstream from the dam site in Hubei.

Despite these losses, salvage work in the Three Gorges region had been carried out on an unprecedented scale prior to the flooding. Exploiting a modest budget of 339 million yuan ($38 million) in government funds, a 7,000-person team representing some 110 different departments or institutes from 20 provinces and autonomous areas worked together to excavate, preserve, protect, or relocate architectural, sculptural, and calligraphy monuments, including Ming and Qing towns, famous temples, and Buddhist cave sculptures, in what can only be termed an unrealistically abbreviated time.

Carried out between 1997 and 2003, the work was directed by the Hubei Institute of Archaeology and the Chongqing Municipality Cultural Relics Bureau in Sichuan Province, and supported by the Chinese Institute of Culture, Qinghua University, Beijing Academy of Architectural Construction, Tianjin University, the Xian Center of Cultural Relic Preservation, Henan Institute of Ancient Architecture, Shanxi Institute of Ancient Architecture, Wuhan University, Wuhan Municipality Institute of Archaeology, Yichang Museum, the Cultural Relics and Archaeology Team of Zhuang People of Autonomous Guangxi, Jilin University, and Shandong University. The sharing of responsibility between so many different peoples from different reaches of China, with different dialects, customs, and work practices, is immensely ambitious and impressive in its success. "The Three Gorges area of Chongqing was an area heretofore completely unknown culturally and archaeologically—a historical mystery," said Liu Yuquan, director of the Three Gorges Chongqing Cultural Relics Bureau. "The area may now be recognized as an advanced culture of prehistory."

—ELIZABETH CHILDS JOHNSON
CLIFFORD’S TOWER FACES SOLITARY CONFINEMENT

Clifford’s Tower, a late thirteenth-century hilltop fortress and possibly York, England’s most famous monument may soon be strangled by a shopping mall if a proposal put forth by Land Securities, Ltd, a local development authority, is approved. According to the prospectus, the relatively isolated tower, which overlooks the River Foss, is slated to become the centerpiece of a shopping and residential development known as Coppergate II.

Originally part of a castle built atop an artificial hill by William the Conqueror in 1069, the tower has an historic significance for the area, as it stands on the site of a horrific massacre of York’s Jewish population in 1190. At that time, a large group of Jews had taken refuge from a rampaging mob, inspired by the emotionally charged environment of the Crusades, in what was then a wooden tower. Rather than perish at the hands of the mob, many Jews took their own lives; others died when the tower was set ablaze. Those who surrendered were murdered.

Between 1245 and 1262, the keep was rebuilt in stone on a quatrefoil plan, of which there is no other example in England. The keep later became known as Clifford’s Tower, after Roger de Clifford, who was hanged there in 1322.

“Today, Clifford’s Tower stands as a potent reminder of religious and racial intolerance—an educative force in an unstable world,” said Dave Gorman, a spokesperson for the Castle Area Campaign Group, which has been working to save the tower from being engulfed in what it calls “shoppertgate.” “To build a shopping mall on the site of the massacre is as outrageous as building a commercial center on the grounds of a concentration camp in Eastern Europe.”

Those interested in following the tower controversy are encouraged to visit www.yorkcastle.com. —AMHS

THE ARTISTRY OF LYNN DAVIS, AVAILABLE THROUGH WMF

Stunning images of some of the world’s most treasured sites—Angkor, Petra, Machu Picchu, Brancusi’s Endless Column, and St. George’s Church at Lalibela—by acclaimed photographer Lynn Davis are now available through WMF:

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For more information on the images or to place an order, visit www.wmf.org/html/programs/gallery.html or call Martha Flach at (646) 424-9594

Lynn Davis is represented by the Edwynn Houk Gallery, New York
Into the Maya Outback

Newfound Sites on the Usumacinta River

A suite of long-lost Maya cities, cloaked in jungle for more than 1,000 years, has just come to light on the eastern bank of the Usumacinta River. Rediscovered by a multinational team, led by archaeologist Charles Golden of the University of Pennsylvania, the four "new" sites are located within Guatemala's Sierra del Lacandón National Park. The area, considered by many to be one of the New World's richest biodiversity zones, may be severely impacted if plans to construct a hydroelectric dam, or series of dams, on the Usumacinta are approved.

"We knew from inscriptions, information provided by park guards, and the appearance of unprovenienced sculptures on the international art market that numerous undocumented ruins lay in the densely vegetated area surrounding the well-known sites of Yaxchilán and Piedras Negras," says Golden, noting that, until recently, this part of the Southern Maya Lowlands remained terra incognita to archaeologists despite nearly a century of exploration. "Two of the four sites—Texcoco and Tecolote—had been noted by archaeologists and travelers. However, little was known about them," he adds. "The others—Esmeralda and Fajardo—were hitherto unknown." Funded by WMF and the Foundation for the Advancement of Mesoamerican Studies, Inc., Golden and his team set out to document as much as they could during the spring field season. The new sites, which are smaller than Yaxchilán and Piedras Negras, will be at risk should plans for the dam move forward. "Considering we were in the field for only a few weeks," says Golden, whose team spent much of the season carrying out conservation work at Piedras Negras, "we have just begun to discover what's out there." Due to their imperiled state, Yaxchilán and Piedras Negras were placed on WMF's 2002 list of the 100 Most Endangered Sites.

Esmeralda & Fajardo

The cities of Esmeralda and Fajardo were discovered in an area between low-lying, seasonally inundated wetlands, or bajos, and higher upland forest, both of which are rich ecological zones. Operating from a nearby basecamp, Golden and his team were able to extensively map Esmeralda, which boasts some 83 mounds or mound groups surrounding a main architectural grouping composed of approximately 21 structures. Most of the mound groups—separated from each other by 50 to 80 meters—consist of one to four structures arranged within a formal patio. "Although the architecture is imposing for rural settlement," says Golden, "the masonry is not finely done and typically consists of a veneer of rough-cut blocks over dry-laid rubble core. We believe that the city may have been a minor political center during the Late Classic period (A.D. 600–800) when Piedras Negras controlled most of the region." Ceramics recovered from looters' pits, however, indicate that the city thrived into the Terminal Classic period (A.D. 900–1000), surviving for some time following the fall of the Piedras Negras kingdom.

Like Esmeralda, the site of Fajardo appears also to have been a minor city under the hegemony of Piedras Negras. Its settlement is similar to Esmeralda in terms of density and its location between seasonally inundated wetlands and arroyos. However, the team was able to undertake only limited exploration of the site. During a five-hour reconnaissance, Golden and his team identified and plotted coordinates for 27 plaza groups over an area of approximately 15 square kilometers, but they were unable to find the city's urban core. They were able to locate Fajardo based on reports from Defensores de la Naturaleza (Defenders of Nature), an NGO that co-administers the park with Guatemala's National Council for Protected Areas, which had noticed a number of mounds during a recent macaw survey.
TEXCOCO

Although the site of Texcoco had been identified nearly a century ago, it had never been investigated by archaeologists, and its location had been forgotten. Following a failed attempt to locate the site along the shores of Lake Texcoco, park guard Chico Leon and archaeologist Edwin Roman rediscovered the site to the southwest of the lake. Project members spent two days mapping the site center with tape and compass. "While the plan is incomplete," says Golden, "it does provide a good idea of the size and nature of the site, which runs along a ridge line and includes a palace complex and three patio areas."

The palace complex known as "La Gallina" rises up in three terraces, each nearly two meters high, and marks the southwest boundary of the site. The masonry is poor in comparison to that at Piedras Negras and other sites in the region, and consists of roughly worked boulders and cobbles. There is no evidence that any of the structures were vaulted, although the masonry outline of walls is obvious beneath layers of collapse.

A patio area with seven buildings built atop a large platform, among them what appeared to be a large pyramid ten meters in height, was found just to the northeast of La Gallina. A second, smaller patio with four structures also on a platform was found still farther to the northeast. On the northwestern side of Patio 2, the team identified a monumental sweatbath, similar to the eight known sweatbaths at Piedras Negras. To the southeast of Patio 2, the team found a third patio, thought to be a residential plaza with five structures atop a large platform. At the northeastern end of the escarpment is yet another large platform with two terraces. A staircase on the northeastern side of the platform may have served as the gateway to the city. The team found several smaller mounds in the hills surrounding Texcoco's site center, suggesting abundant settlement of the area.

TECOLOTE

Tecolote first came to the attention of archaeologists in the 1930s. At that time, Edwin Shook noted in his journals that while on a trip to Piedras Negras, his guides told him of standing, vaulted structures near the Chico Zapote rapids, but he lacked time to visit the site. In the 1980s, George Stuart of the National Geographic Society was shown photographs of a well-preserved, vaulted structure that travelers had encountered on a trip down the Usumacinta. Park guards were sufficiently familiar with the area to lead team members A. Rene Munoz and Andrew Scherer to the site. They spent three days exploring and mapping the city center, which included Structure 1, the vaulted, three-room building shown in the tourists' photograph. Structure 1 is well preserved, although roots from a tree have penetrated the northeast corner of the building, and the back wall of the building is slightly bowed. Unfortunately, looters destroyed much of the interiors and built-in benches. A crypt in the floor of the northern room recently had been stripped of its contents. A skeleton of a howler monkey, perhaps a looter's meal, was tossed unceremoniously into the crypt. Despite the damage, the plastered walls in each room still bear large fragments of polychrome murals that once graced the whole of the interior. Although the images are barely visible to the naked eye, the team was able to make out a black outline of the right wing and leg of a bird, poised to grasp a fish with its talons, on the southwestern wall of the southern room. Conservation and study of the murals are slated for the next field season.

In addition to Structure 1, the site core contained the collapsed remains of six other vaulted buildings, including a monumental sweatbath, similar to those at Piedras Negras and Texcoco. The architecture at Tecolote is quite similar to that found at Yaxchilán, particularly that of Structure 1, which can be stylistically dated to the Late Classic period (A.D. 600-900). Two niches on the façade of the building bear sockets for tenons that once supported high-relief sculptures similar to the human figures found on Yaxchilan Temple 33. According to Golden and his team, Tecolote may have been a political ally of Yaxchilán, being near the site of La Pasadita, which, according to the epigraphic record, was part of the Yaxchilán kingdom.
Shortly before daybreak on December 12, 1995, storm clouds gathered just off the coast of northern California. Within hours, an unholy alliance of cold air, strong high-altitude winds, and plummeting atmospheric pressure erupted in what meteorologists call an explosive cyclogenesis—in layman's terms, a "bomb" cyclone. The storm, with winds in excess of 160 kilometers per hour and torrential rains, thundered up the coast, unleashing its wrath on San Francisco and other coastal cities. Among the casualties was one of San Francisco's greatest architectural and cultural treasures, the Conservatory of Flowers in Golden Gate Park.

In the days that followed, Mayor-elect William "Willie" Brown made a personal commitment to make the restoration of the Conservatory of Flowers a top priority. He dispatched a team from the Department of Public Works to survey the damage. The century-old wooden structure had suffered severe damage to its south and west elevations, which bore the brunt of the gale-force winds. Weakened by years of exposure to high humidity, support members had simply given way, and portions of the building collapsed. More than 40 percent of the conservatory's glass tiles had shattered, taking out an extensive collection of tropical plants. Rare palms were sheared to the ground, glass pieces were imbedded in tree trunks, and a 70-year-old cycad had been crushed by falling wood beams. The floor was a glittering carpet of jagged shards. The conservatory had sustained more than $10 million in damage.

The team did what it could to shore up the structure and cover open areas of the building with reinforced mylar while conservatory staff and volunteers picked up glass, hauled away refuse, and removed damaged plants to temporary housing. Despite these efforts, conservatory staff was unable to keep the building sealed. Exposed to winter temperatures, rare and fragile flora were severely traumatized. Within days, some 15 percent of the collection was lost.

Many thought the conservatory beyond repair. Others believed that the historic building could be restored only if the funds could be raised and the proper preservation team found. A nonprofit organization, Friends of Recreation and Parks, joined with the San Francisco Garden Club and began raising funds for the conservatory's restoration. Realizing that time was of the essence and that delays could further threaten the building, Deanna Brinkmann of the San Francisco Garden Club convinced the group to nominate the conservatory for inclusion on the World Monuments Watch inaugural list of the 100 Most Endangered Sites in 1996. Following its listing, American Express contributed $100,000 toward the restoration campaign.

On December 11, 1998, nearly three years after the great storm, then First Lady Hillary Clinton visited the site to designate the building as an official project of a new public-private partnership program, Save America's Treasures. The honor was accompanied by a $1.24 million grant from the Federal Emergency Management Agency. This auspicious recognition attracted a series of benefactors: The Richard and Rhoda Goldman Fund offered a challenge grant of $5 million in order to raise a further $10 million from other sources, such as the Madeline H. Russell
THE RESTORED CONSERVATORY
AGLOW AT AN OFFICIAL LIGHTING
CEREMONY ON APRIL 30, 2003.
PRIOR TO THE CONSERVATORY'S RESTORATION, A NEW SET OF BLUEPRINTS HAD TO BE DRAWN UP FOR THE BUILDING AS ITS ORIGINAL PLANS WERE LOST IN A FIRE. BELOW LEFT AND RIGHT, THE CONSERVATORY BEFORE RESTORATION BEGAN.

Fund and the Columbia Foundation. Encouraged by this show of support, the Board of the Friends of Recreation and Parks launched a campaign to raise an additional $12 million to complete the restoration and a further $4 million for new exhibits. With funds in place, work began on the first phase of restoration—a complete documentation and analysis of the remaining structure.

Although the Conservatory of Flowers was a well-regarded landmark, not much was known about the history of the building, and there was precious little documentation available to guide its restoration. Some believed the conservatory design was based on the Palm House at Kew Garden in London, England. According to several historical documents, the building had been brought to San Francisco from either Europe or the East Coast, by way of a perilous journey around Cape Horn. “Here was this unique animal,” recalled Edgar Lopez, project manager for the Department of Public Works Bureau of Architecture. “We were confronted with restoring a prefabricated, one-of-a-kind, nineteenth-century greenhouse without any existing drawings. We had no idea how to put the building back together again.”
The City of San Francisco engaged Architectural Resources Group and Tennenbaum Manheim Engineers to carry out the conservation, restoration, and rehabilitation of the conservatory. As plans for the restoration progressed, clues to the building's origins began to emerge. In the early 1870s, James Lick, a real estate magnate from San Jose, had commissioned the design and manufacture of the greenhouse for his estate in Santa Clara Valley, but Lick died before the greenhouse could be erected. Its components remained in crates until 1878, when a prominent group of San Francisco businessmen purchased the kit and donated it to Golden Gate Park. The Park Commission gratefully accepted the gift and hired the renowned greenhouse design and manufacturing firm Lord & Burnham of Irvington, New York, to assemble it.

In addition to conflicting information surrounding the origin of the building, several early accounts of the donation mention two conservatories rather than one. Some have posited that there were, in fact, two greenhouses—the conservatory itself, and a smaller propagation structure. Others have suggested that only the conservatory's wings had been donated, and that the central dome was commissioned sometime later to unite them. If so, the dome may have been made by Lord & Burnham, as it bears a striking resemblance to several structures in their catalog. We may never know for sure, as most of the Lord & Burnham archives perished in a blaze in 1881.

An 84-square-meter portion of the west wing of the structure was disassembled in order to examine its individual components, so that a proper conservation strategy could be developed. Each piece of the building was then surveyed to determine materials composition, age, and structural integrity. It was soon revealed that the conservatory was constructed of several different kinds of wood, most of which came from California. "While the building's design may have been of foreign origin, its components clearly were not," said Debbie Cooper, the project manager for Architectural Resources. "Samples taken of structural elements revealed the wooden structure was built almost entirely of Sequoia sempervirens, better known as California redwood."

Conservators also discovered that after years of exposure, many of the wooden beams were in advanced stages of deterioration, and many of the building's metal fittings were rusted beyond repair. In addition to replacing these elements, restorers would have to comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties and take into account new seismic and safety regulations. Moreover, all work would have to be done without further damaging the conservatory's immovable residents, including a towering, century-old philodendron. The gargantuan...
plant would sustain irreparable damage if it were subjected to temperatures less than 14°C.

A lively discussion over the choice of materials was prompted by the fact that many of the pieces of the conservatory were no longer structurally viable and required replacement. At first, the team suggested the use of pressure-treated, new redwood as the most appropriate. However, many in the environmentally conscious city objected to the idea. A compromise was finally reached, and the team settled on reclaimed, old-growth redwood that came from naturally downed trees or wood abandoned by loggers. This required that after each piece was milled, it be graded to determine its structural integrity. Replacement pieces alone numbered 2,000, some of which were six meters long.

Historic authenticity and accuracy were also main concerns for the restoration team. The conservatory's pre-storm appearance was not its original design. The dome of the building had been destroyed in a fire in 1893 and redesigned during the subsequent restoration. With no plans or records of the original dome's specifications, the team decided to retain the 1893 dome. While accuracy in design was followed as stringently as possible, structural alterations were mandatory. Bringing the building up to code necessitated the introduction of steel reinforcements and new concrete foundations, while inherent flaws in the original construction and subsequent restorations—as well as natural aging—forced the adaptive reuse of original components so that structural flaws could be corrected.

The conservatory's 100 wooden arches are actually assemblies of several pieces of wood connected with elegant scarf joints. The team was able to salvage and reuse two thirds of the original redwood, preserving authenticity and integrity of the historic structure now listed on the municipal, state, and national registers, as well as holding the distinction of being an Historic Civil Engineering Landmark.
In addition to new mechanical and electrical systems, restoration included the installation of automated environment-control systems that operate the heating, ventilation, and fogging systems to simulate the environments the plants need to survive.

From the outset of the project, conservatory curators also began to consider how the exhibits could benefit from the reconstruction. Scott Medbury, the conservatory’s director, recalled, “we realized that we were uniquely positioned to reinvent the conservatory with exhibitions that matched the architecture.” This led to the creation of a blue ribbon panel of advisors to help guide the work of landscape architecture firm, The Portico Group, which specializes in interpretive planning and exhibit design for natural history institutions. The group foresees visitors passing through lush jungles and cool mountain rainforests as well as by waterfalls and ponds, all displaying the grandeur of the conservatory’s collection. The intended result is to be a visceral and educational experience for the visitor, who, through interpretive and interactive exhibits, will be able to explore and gain a renewed understanding of the world of plants.

Eight years and three restoration phases later, the resurrection of the conservatory is almost a reality. In January 2003 the central dome of the conservatory was reinstalled, signaling the last stretch of work before the grand reopening on September 20, 2003.

The restoration of the Conservatory of Flowers highlights the importance of partnerships between public and private entities. This fall, when the public returns to the Conservatory of Flowers, they will enter a world filled with fragrance and beauty. It is hoped that when they depart, they take away with them not only the lesson that well-tended gardens can be awe-inspiring, but that monuments themselves are able to bloom just as brilliantly.
ool air blasts across my face as I gaze out a broken window on our twin-engine airplane, bound for Gunungsitoli on the island of Nias, 125 kilometers off the west coast of Sumatra. Below, whitecaps frolic atop the deep azure waters of Mentawai Strait. Today, these very waves, spawned by strong currents in the Indian Ocean, are shaping the island's future. Once known for its exquisite wooden architecture and fierce tribal ways, Nias has become a mecca for surfers, whose only connection to the past is through reenacted war dances and the buying of native trinkets.

At 130 kilometers long and 45 kilometers wide, Nias is just slightly smaller than better-known Bali. Until the Dutch colonized the island in 1825, its rugged terrain, malarial climate, and warlike population had isolated the peoples of Nias from mainstream Sumatran culture. As a result, islanders were spared most of the dramatic influx of Indian, Islamic, and European cultural influences that swept through the rest of Indonesia. In relative solitude, they developed a feudal society, built on a reverence for ancestors and those who could mediate between this world and the next. Over the past century, however, Christianity has taken hold on the island, replacing traditional beliefs, with old ways gently yielding to the lure of a modern world.

I have come to Nias on behalf of the National Museum of Denmark to retrace the steps of Agner Møller, a Danish doctor who carried out extensive ethnographic work on the island in the 1920s, and to document what is left of the island's traditional villages and their wooden architecture. Møller, a somewhat controversial figure, procured an extraordinary collection of artifacts from the island on behalf of the National Museum, including significant portions of an omo sebua, or chief's house, purchased from its owners in the village of Hillimondregaja.

Much has changed since my first visit in 1988. At that time, the island was just beginning to emerge as a favored destination for backpackers and surfers, who sought its rustic hospitality, lively nightlife, and towering "righthanders," considered...
A Tourist Bungalow at Sorake Beach is one of many that has sprung up in recent years to cater to an ever-growing surfing population. Once isolated from mainstream Sumatran culture, Nias is now home to the Indonesian Surfing Open, held every summer.
THE SECLUDED HILLTOP VILLAGE OF ORAHILLY, TOB, IS EMBRACED BY TROPICAL JUNGLE. A SURFER ENJOYS ONE OF NIAS' FAMOUS "RIGHANDERS." AMONG THE BEST WAVES IN THE WORLD. ALTHOUGH MANY OF THE ISLAND'S TRADITIONAL BUILDINGS WERE IN DESPERATE NEED OF CARE AND ATTENTION, THEY WERE, NEVERTHELESS, STILL STANDING. TODAY, HOWEVER, CONCRETE BUILDINGS WITH ROOFs OF CORRUGATED METAL OUTNUMBER THOSE CONSTRUCTED OF WOOD; IN MANY VILLAGES, SATellite DISHES HAVE DISPLACED STONE MEgALITHS DEDICATED TO REVERED ANCESTORS AS VILLAGE FOCAL POINTS.

THE RECENT POLITICAL CRISIS IN INDONESIA, AND THE HARDSHIP IT HAS CREATED, HAVE MADE IT MORE DIFFICULT TO TRAVEL ON THE ISLAND THAN IN THE PAST. THE ONLY IMPROVEMENT I HAVE NOTICED SINCE MY LAST VISIT IS THE CONDITION OF THE COASTAL ROAD FROM GUNUNGSITOLI TO THE SOUTH END OF THE ISLAND, THE BY-PRODUCT OF A FAILED ATTEMPT TO ENHANCE THE ISLAND'S ALLURE AS A "HIGH-END" TOURIST DESTINATION A FEW YEARS BACK.

UPON MY ARRIVAL IN SORAKE BEACH, WHICH I PLANNED TO USE AS A BASE OF OPERATIONS, I WAS SURPRISED TO FIND NOT THE IDYLIC CLUSTER OF RUSTIC PALM HUTS LINING THE BEACH WHERE I HAD STAYED ON MY PREVIOUS VISIT, BUT NUMEROUS CONCRETE BUILDINGS, MOSTLY GUESTHOUSES, ABANDONED MIDWAY THROUGH CONSTRUCTION AND LEFT TO ROT IN THE TROPICAL SUN. THE MOST OPULENT OF THESE WAS THE SORAKE BEACH RESORT, A MULTI-MILLION-DOLLAR ESTABLISHMENT BUILT TO CATER TO RICH AND DISCERNING TRAVELERS, PRIMARILY THOSE FROM JAPAN. POLITICAL UNREST IN INDONESIA AND A FISCAL CRISIS IN JAPAN, HOWEVER, PUT A HALT TO THE PROJECT. NEVERTHELESS, THE HOTEL IS TENDED BY A STAFF OF NINE THAT SPENDS MOST OF ITS TIME CULTIVATING VEGETABLES.
on once-manicured lawns. As I walked through the reception area, the only sound I heard, apart from my own footsteps, was that of geckos. Clearly, good intentions had gone astray.

Over the course of a month, I took several thousand images of more than a dozen traditional villages, all of which had been documented and photographed by Moller nearly a century ago. Despite enhancement of the coastal road, several of the villages remain accessible only by narrow paths that wind through dense tropical jungle and rugged terrain. I knew from my last visit that much had changed since the doctor conducted his research. I was disheartened, however, to find that in 15 years, many of the island's traditional buildings had fallen victim to merciless sun, tropical rains, insect infestation, and neglect. Others had been completely stripped of their magnificent woodcarvings. Overharvesting of timber has made it impossible to rebuild or restore the chief's houses and in several villages, there is nothing but an empty spot where in earlier times, a magnificent building rose above the forest canopy.

The economic situation has given rise to a rampant trade in old objects. In one village, I spoke with the headman/chief, and he was willing—almost insisting—to cut out carvings from the wall panels in his house, without any regard to their age or importance. In another, the headman said to me in a melancholy, remorseful tone: "Everything is gone, nothing is left, and everything has been sold," his words echoing in a stately, but empty, audience hall, robbed of all its former glory.

Despite the seemingly desperate state of affairs, a few splendid omo sebua remain, in the villages
When I began traveling to Nias in the 1970s, I was struck by the imposing and ornate chief's houses that dominated most of the local villages, particularly on the south end of the island. Erected on stilts, the chief's houses—known as omo sebua (big house) or omo lasara (house with lasara or dragons' heads)—towered more than 20 meters above the ground, had steeped pitched roofs and skylights, and were adorned with some of the finest wood carvings known in Indonesia.

At that time, most of the chief's dwellings, which served as royal residences and community meeting houses, were in relatively good condition. The older ones, particularly those built in the late eighteenth and early nineteenth centuries, were in need of some repair but not much beyond routine maintenance. Perhaps more important, village houses—for royal and commoner alike—were still being built using traditional methods and materials.

In the 1980s, I was invited back to the island to design a small, local museum for a friend, Pastor Johannes Hämerle of the Catholic Mission of Nias. While I was there I was asked if I could assist in the restoration of several omo sebua. I was surprised to find that in just over a decade, many of the chief's houses had fallen into ruin. One, in the village Ondhondró, had collapsed, having been abandoned by the family who lived there; they were too poor to maintain it. Another in Bawómataluó—the only village that has managed to capitalize on the few visitors to the island—was being completely rebuilt as a tourist attraction with government funds. New panels and sculptures had to be carved to decorate the building; its originals had been sold off to tourists or art dealers.

Today, sadly, only five buildings predating the mid-nineteenth century still stand—in the villages of Bawómataluó, Sifalágó Suzuwa, Hilinawaló Gomo, Ondhondró, and Hilinawaló Mazino. The omo sebua in Hilinawaló Mazino is by far the most beautiful. Built six generations ago by Sihola Bulólo, whose descendants still occupied the dwelling until 1979, the house stands on a terrace facing the village's street. It is the first house in the village to receive the morning sun. Consequently, it is also the first house the commoners see when they wake up. Its location is a reflection of the revered status of the chief, whose title, si'ulu, means "the one who is upstream."

The house has a superb, east-facing facade. Beneath the window, there are three levels of painted panels. The upper level is covered with a frieze of diamonds and leaves, the two...
lower ones with a frieze of rosettes, with the whole decor being black, white, and red. A footbridge leads to a flight of stairs beneath the house. One enters the building through a door in the floor on the main audience hall. Interior spaces are adorned with numerous carved, painted panels—some of which are remnants of earlier dwellings. On the left side of the building, another flight of stairs lead to a verandah.

The public area within the house measures 103 square meters. On the right wall is an altar for the ancestor figures, adorned with lasara head carvings on each end. The lasara is the symbol of the si'ulu, the chief. On display are numerous symbols and foreign objects acquired by the chief, including a collection of gongs, drums, and steel chains from Dutch ships.

Although the chief's house in Hilinawalo Mazino has survived for nearly two centuries, it is in desperate need of conservation, suffering from age and insect infestation. Moreover, the traditional methods of construction have been for the most part forgotten, concrete having displaced wood as the island's preferred building material. Economic hardship in the region compounded by a shortage of timber on the island has thwarted restoration efforts. Given the perilous state of the building, it was included on WMF's 2000 and 2002 lists of the 100 Most Endangered Sites. Without funds and technical assistance, as well as an advocacy campaign to increase awareness of the elegant wooden buildings, we are certain to lose an exquisite, yet vanishing, vernacular form.

In addition to the destruction of traditional houses, the economic crisis has fostered a rise in crime, an issue that was never thought of years ago. During my stay, perhaps 20 tourists arrived in the area. Most, however, left almost immediately, driven off by aggressive beach vendors and innkeepers whose idea of cornering the market was to prevent guests from dining anywhere outside their hotels.

Moreover, traditional cultural values continue to erode at an accelerated pace. For all their isolation, villagers now experience the never-ending joy of karate movies, soap operas, and music videos on flickering television screens that never seem to be switched off. What has not been influenced by television, has clearly been affected by the surfing culture, with its cool, carefree lifestyle and impact on the economy. Nearly all of the island's tourism revenues are generated during the brief few weeks each year when Nias hosts the Indonesian Surfing Open.

For the adventure traveler who delights in the splendors of Angkor or of the regal city of Luang Prabang, a trip to Nias is more than worth the effort. And, if the political situation in the region ever stabilizes, and if the Indonesian government is able to resist falling into the hands of fundamentalists, it is possible that a wider audience might be able to appreciate the cultural treasures Nias has to offer. Time, however, is clearly running out.
A MIDSUMMER'S DAWN ILLUMINATES A PRECIPITOUSLY STEEP SECTION OF GREAT WALL NEAR BEIJING.
In the early 1580s, an illustrated manuscript was delivered to the Antwerp atelier of renowned cartographer Abraham Ortelius. According to the manuscript’s purveyor, Arius Montanus, a Benedictine monk and one of the cartographer’s most trusted informants, the document had come from Luiz Jorge de Barbuda, a brother in the Society of Jesus and a prominent Portuguese geographer. On a chart, Barbuda had summarized various discoveries and observations made by Jesuit missionaries in the Far East since the establishment of Portugal’s colony at Macao in 1550. Ortelius included a copy of the chart—the first map of China ever published in the Western world—in his 1584 edition of *Theatrum Orbis Terrarum* (Theatre of the Whole World). Perhaps more important, the illustration provided the West with its first glimpse at what was destined to become one of the world’s most famous monuments—the Great Wall of China. Alongside the rendering of the Great Wall was a brief inscription: *Murus quadrin­gentarum leacarum, inter montium crepidines a rege Chine contra Tartarorum ab hac porte eruptiones, extractus* (A wall of 400 leagues, between the banks of the hills, built by the King of China against the breaking in of the Tartars on this side).

With a purported length of approximately 1,200 English miles, some regarded the Great Wall depicted on Ortelius’ map as fanciful as the grotesque sea monsters guarding the deep. Nevertheless, the Great Wall would become a standard cartographic element, appearing on numerous
Built during the Ming Dynasty (A.D. 1368–1644), the Great Wall of China depicted on the maps was the last in a succession of defensive walls raised to protect the country’s northern frontier from nomadic attack. At least 16 Great Walls were built between the fifth century B.C. and the sixteenth century A.D.; collectively, they stretched an estimated 50,000 kilometers across the Chinese landscape, most of them taking different routes from their predecessors. Five of the walls were known as wan li chang cheng (walls of boundless length) due to their enormous scale. Of these, the Qin Dynasty (221–207 B.C.) Wall is the oldest; the Han Dynasty (206 B.C.–A.D. 220) Wall, which runs some 7,200 kilometers, the longest. The Liao and Jin Great Walls, built during the tenth and twelfth centuries, were, ironically, the work of the very invaders China’s emperors worked so hard to keep out. The Ming Wall, built in large part during the reign of Wanli (A.D. 1572–1620), is the youngest of the walls, the most militarily sophisticated and grand, and by far the best preserved.

Eventually developing into a tortuous system of border defenses, including loops and spurs, and measuring some 6,700 kilometers by the time of its abandonment in 1644, the ruins of the Ming Dynasty Great Wall are architecturally varied and collectively constitute the world’s largest cultural relic in sheer building-material volume. Early travelers to the region attempted to relate the scale of the wall to those back home. British audiences of the late 1790s were told in An Authentic Account of an Embassy from the King of Great Britain to the Emperor of China that “the amount of stone in the wall was equivalent to all the dwelling houses of England and Scotland.” If dismantled and reconstructed at the equator, readers were told, there would be enough material to build a smaller wall that could circle the globe twice. Adam Warwick, in a 1923 edition of National Geographic, showed his American readership on a map “where the Wall would run if transferred to the United States,” while L. Newton Hayes, a missionary’s son living in Tianjin, speculated in 1929 that “of all the works of man’s creation, the Great Wall is the only one that would be visible to the human eye from Mars.” Hardly a book, magazine, documentary, or travel feature since has not included the trivia—and outright fiction—that the structure is visible from the Moon.
Architecturally, the Ming Wall contains a number of structural elements, linked physically or lying in relatively close proximity to the wall. In desert areas the wall was made of rammed earth; only in mountain regions was it made of quarried stone and brick. Aside from the wall itself, the most common architectural elements are beacon towers, used for signaling, storage, shelter, and withstanding siege in the event of attack. Most towers were square or rectangular in plan, a few circular or ovoid. The more important towers had large central chambers to accommodate section commanders, while less important ones were simple networks of interlocking arched corridors. Most towers were two-story structures with flat roofs, but a few had apex roofs, as evidenced by occasional room walls and roof tiles. More elaborate roofs had ridge ends and roof guardians, and rare field evidence shows that some roofed structures even had decorative tile ends bearing monster faces. Many towers contained engraved tablets recording visits of military officials and other visiting dignitaries. Along the wall, many gates were built to accommodate the passage of people and water, and grand fortresses were constructed at the most vulnerable locations. The best examples of these are the terminal fortresses of Jiayuguan, at the western end of the Ming Wall, and Shanhaiguan, at the eastern end of the wall’s main line. Jiayuguan is located on the desert escarpment between two mountain ranges, while Shanhaiguan occupies the narrow band of coastal plain between the Yellow Sea and mountains.
Having defended China for more than two millennia, the last of the Great Walls, like its predecessors, was eventually abandoned, this time in the wake of the Manchu invasion of 1644. Today, 359 years since construction ceased, the Great Wall is a mere shadow of its former self. Over the centuries, various forces, both natural and man-made, have conspired to alter, damage, and destroy it, leaving an estimated 4,500 kilometers—or two-thirds—of its original structure standing. What remains of the wall presents one of the world's great conservation challenges.

As soon as the Ming Dynasty collapsed, the military looted the wall for the best pickings, removing wooden doors and shutters of towers, fine carvings, and engraved slabs of stone. Nature, too, has done its part. Winds have deposited sand on the pavement of the wall. Bird droppings containing seed soon colonized the pavement with plants—weeds at first, then bushes and small trees. Roots have loosened masonry, and once-a-century earthquakes have struck and toppled sections of the wall. Arches have weakened and collapsed, and towers have cracked. Winter freeze-thaw cycles have gradually forced slabs of rock apart. Summer rains have washed away loose mortar. A wilderness wall, or wild wall, has evolved.

To protect something fully, one must first define its boundaries. It is important to understand that the wall and its surroundings are archaeologically inseparable, united in a consanguineous relationship. The land beside the wall and in view of the wall is where stones were quarried, where bricks were baked, where clay was dug, where trees were felled to fuel kilns, and where the wall builders lived and worked. In essence, the wall is a reflection of the very land from which it was created.

Following the abandonment of the Ming Wall, it is quite likely that many of those who built, guarded, and maintained it remained, living in its shadow as ordinary farmers. It also follows that the modern inhabitants of wall-side villages are descendants of the ancient wall builders. Sometimes this can be verified: for example, bricks sometimes bear cartouches that record the provincial military construction unit, and these often match with the location of villagers' ancestral homes.

In mountain areas, village buildings themselves might also be considered part of the landscape, as many were wrought of material removed from the wall during the destructive revolutionary campaigns of the Great Leap Forward (1958–1959) and Cultural Revolution (1966–1976), when Chairman Mao Zedong urged
people to "let the past serve the present" and "smash the four olds by sweeping away the dust of all the old ideas, culture, customs, and habits of the exploiting classes."

The Great Wall is therefore a rich cultural tapestry that encompasses not only the varied architectural remains, but also the local people who have inherited tales and legends relating to the wall from older generations. So distinct and striking is this landscape that perhaps it deserves a name to reflect its significance. "Wallscape" would seem appropriate.

The concept of a wallscape can best be appreciated by viewing a section of the original Great Wall in comparison to a section whose space has been invaded by modern construction. From enjoying the former we realize that the majesty of the Great Wall has two components: the ancient building and the natural backdrop. Once the wall's surroundings are violated by modern intrusions, the majesty of the view is diminished. In addition to the degenerative problems of old age, the wall is under constant attack by man. Vast sections of the wild wall close to Beijing, that only a few years ago were out of reach, suddenly have become more accessible. Cars got cheaper, suburban roads improved, and local townships, eager to get a piece of Great Wall tourism for themselves, even erected road signs to point the way to drivers. This new popularity of the Great Wall prompted local farmers, township officials, and county entrepreneurs to jump on the bandwagon and try their hands at shadow-of-the-wall tourism. Exploiting the absence of a single specific law to protect the unique wall—as an all-encompassing cultural landscape—crass commercialism has sprung up beside, or even upon, the wall in many places. Picnic rubbish has been wantonly discarded, people have scrawled on the 500-year-old bricks, and encroaching development has resulted in a group of ugly, bright buildings that seem alien—modern intrusions on this ancient landscape.

In February 2002, when American president George W. Bush visited the Great Wall at Badaling, he said: "The wall's the same, the country's changed a lot." Bush had been to China when his father, the former president, was stationed in Beijing as U.S. ambassador in the 1980s. Had the president wanted to comment accurately on the state of the Great Wall, he would have been correct if he had said: "The wall's not the same, because the country has changed a lot."

As China continues to record massive economic growth, which in turn is changing
lifestyles, the Great Wall takes on added importance by offering preservationists a new horizon in their seemingly futile quest to tackle conservation of the world's largest cultural relic in the world's most populous country and most rapidly booming economy.

Until recently, plans to protect the wall had not matched these massive social changes. China has adhered to the maxim of the late paramount leader Deng Xiaoping: "Love China, rebuild the Great Wall," uttered in the wake of Mao-sanctioned destruction of things historical, including the Great Wall. Nationwide, a dozen or so sections of wall have been patriotically reconstructed for mass tourism. For almost 20 years this approach has defined Great Wall conservation.

For the past three years, International Friends of the Great Wall, working in collaboration with the Beijing Bureau for Cultural Relics, UNESCO's Beijing Office, and the World Monuments Fund, has spearheaded a program to create awareness of the problems afflicting the wall via the domestic and international press and media, and piloted a stewardship field program. Inclusion of the Great Wall Cultural Landscape in the Beijing Region on WMF's 2002 list of the 100 Most Endangered Sites has highlighted the plight of the Great Wall so that its conservation might find a place on China's cultural relics protection agenda. Partly as a result of these efforts, Great Wall conservation moves into the modern era this Summer, as the Beijing Municipal Government introduces the first generic cultural relics protection laws aimed at combatting the destruction—physical and spiritual—of the wall, albeit only in the Beijing area. The leasing of land to developers adjacent to the wall will be banned, people will be prohibited from accessing certain fragile sections, and buildings causing "visual pollution" will be razed to preserve China's Great Wallscape. ■
Estilled in the canyons and foothills of the Western Sierra Madre lies a suite of caves that harbor some of the richest architectural treasures of the Mesoamerican world. Etched into the landscape by falling rain more than a million years ago, the caves provided refuge for peoples who settled in the region over the millennia, each of whom left an indelible imprint in their deep recesses. The most recent occupants—known to archaeologists as the Paquimé, or “Casas Grandes” people, after a majestic site 120 kilometers to the north where their culture was first identified—began building elaborate earthen dwellings within the ancient grottos nearly 1,000 years ago.

Culturally and stylistically linked to the dwellings of the Pueblo peoples of the American Southwest, those of the Paquimé are multistoried adobe structures with stone foundations, wooden support beams, and t-shaped doorways. Many of the structures are composed of a series of small rooms built one atop the other; their exteriors finished in burnished adobe. Pine ladders provided access to upper floors. Some of the rooms were decorated with renderings of animals and anthropomorphic figures.

Although the structures were erected at some 150 known sites throughout northwestern Mexico, two of the greatest concentrations—Las Cuarenta Casas (40 Houses) and Conjunto Huapoca (Huapoca Complex)—have been found in a series of canyons on the outskirts of Madera in the state of Chihuahua. Over the past decade, both areas have been the focus of a major archaeological campaign aimed at recording what cultural material has survived and elucidating the relationship between the people of Paquimé and other cultures of the Mesoamerican world—namely those of Jalisco, Colima, and Nayarit—and the American Southwest.
According to project director Eduardo Gamboa Carrera of Mexico's Instituto Nacional de Antropología e Historia (INAH), Cuarenta Casas and Conjunto Huapoca were once home to communities of merchants who plied the nearby Papigochic River, transporting conch shells, turquoise, feathers, and other goods between the city of Paquimé and towns along the Pacific Coast. More important, he says, the ancient communities served as vital nodes in a wider New World political system.

"Archaeologists have yet to reach consensus on the precise nature of the relationship between the Paquimé peoples and the cultures of the American Southwest," says Gamboa. "But then again, so little was known about the sites in Mexico prior to our survey of the region, which began in 1990. What the archaeological community has agreed on is the need to preserve what has survived."

Since their abandonment eight centuries ago, sites in the Western Sierra Madre have suffered not only the effects of time but substantial abuse. Local ranchers have used many dwellings in the Madera region as
shelter for livestock. Because of their remoteness— and hence lack of protection—the sites have been prime targets for vandals and treasure hunters. "Perhaps more disturbing," says Carlos Lascano, an intrepid explorer responsible for locating numerous Paquimé sites and bringing them to the attention of archaeologists and the general public, "the caves, particularly the lesser-known ones, have found renewed life as entrepôts in a Mesoamerican mercantile network, serving as hideouts for drug dealers transporting narcotics across the U.S. border."

Although the caves at Cuarenta Casas, being the best known and most accessible, had been open to visitors for some time, and thus afforded modest protection, the site remained vulnerable to uncontrolled tourism. In the early 1990s, INAH had carried out emergency repairs and installed walkways to minimize visitor impact on the site. However, the cave's fragile remains were covered in graffiti and had been trampled by travelers coming to the cave off hours. Given the severity of the situation, Cuarenta Casas— along with the entire suite of caves in the Madera region— was placed on WMF's 1998 list of the 100 Most Endangered Sites.
This past fall, Cuarenta Casas became the subject of an extraordinary conservation effort undertaken by the INAH's Chihuahua office and the Escuela Nacional de Conservación, Restauración, y Museografía (ENCIM). Underwritten by INAH Chihuahua, WMF, and the J.M. Kaplan Fund, the work has focused on a 16-unit complex known as the Cueva de las Ventanas (Cave of the Windows), the largest of the three principal caves that compose the archaeological complex.

Prior to any conservation efforts, Haydee Orea and her ENCRM team analyzed the entire site, documenting every crack and crevice—even the graffiti—to determine the most appropriate materials and methods to use. The ENCRM team decided on a conservative approach to the restoration, opting to conserve and stabilize crumbling areas rather than completely replacing them with fresh adobe. They replaced and reinforced wooden structural elements only where absolutely necessary. Following stabilization, restored surfaces were then visually integrated with original ones so that the patina was consistent throughout the site.

"The result was nothing short of extraordinary," says Gamboa. "We were privileged to have had what was no doubt the best restoration team assembled in Mexico in a very long time."

In addition to restoring the ancient adobe buildings, the pilot project included development of a long-term management plan and improvement of walkways, overall site interpretation, and visitor services. Today, work at Cueva de las Ventanas is complete, serving as a model for future conservation efforts in the region. The same team is now developing plans to carry out similar work at Huapoca and lesser-known sites so that they too may be preserved for future generations.
I first heard about James Achilles Kirkpatrick on a visit to India in February 1997. I had just finished a book on the Middle East and was burnt out, so I went to the ancient city of Hyderabad in south India to get away from my desk and my bookshelves, to relax and recover. It was spring, and the stones of the mosques of the Old City were warm underfoot. Unlike the immediate, monumental splendor of Agra or the Rajput cities of the north, Hyderabad seemed to hide its charms from the eyes of outsiders, veiling its splendors behind nondescript walls and labyrinthine backstreets. Only slowly did the city allow one into a hidden world where water still drips from palace fountains and peacocks call from the overladen mango trees. Here, hidden away, I found a world of timelessness and calm, where, as one historian put it, old "Hyderabadi gentlemen still wore the fez, dreamt about the rose and the nightingale, and mourned the loss of Granada."

This romantic and courtly atmosphere had infected even the sober British when they arrived in the city at the end of the eighteenth century. During my stay, I visited the old British Residency, which two centuries ago had, in essence, served as the British Embassy.

Sited in a garden just over the River Musi from the old city, the vast Palladian villa, which now houses the Osmania Women's College, is similar in plan to the White House in Washington, D.C. The complex was built by Colonel James Achilles Kirkpatrick, the British resident at the court of Hyderabad between 1797 and 1805. Kirkpatrick had gone out to India full of ambition, intent on making his name in the subjection of a nation; but instead, it was he who was conquered, not by an army but by a Hyderabadi noblewoman, Khair un-Nissa. I was told how in 1800, after falling in love with Khair, Kirkpatrick not only married her according to Muslim law and adopted Mughal clothes and a Mughal style of living, but actually had converted to Islam and became a double agent, working on behalf of the Hyderabadis in their struggles against Britain's East India Company.

Since its heyday, the Residency had fallen into decline. Inside, plaster was falling from the ceiling of the old ballroom. Upstairs, the old bedrooms were decayed and deserted, frequented only by bats and pigeons. As the central block of the house was deemed too dangerous for students, most classes were held in the old elephant stables at the back of the property. Yet, even in this state of semi-ruination, it was easy to see how magnificent the Residency had once been. Beneath the huge colonnaded front of the north facade lay a pair of British lions, paws extended, every inch the East India Company at its grandest and most formal.

At the back of the Residency, I was shown a battered token of Kirkpatrick's love for his wife, Khair un-Nissa, remained all her life in strict purdah, that is living in a separate bibi-ghar or "women's house" at the back of Kirkpatrick's garden, unable to walk around her husband's estate. Eventually, Kirkpatrick built a scale model of the Residency for her so that she could examine in detail what she would never allow herself to.
see with her own eyes. The model had survived intact until the 1980s when a tree fell on it, smashing the right wing. The remains lay under a piece of corrugated iron, beneath a jungle of vines and creepers in the area still known as the Begum's Garden, near the ruins of the bibi-ghar.

The whole romantic tale simply seemed so different from what one expected of the British in India that I spent the rest of my time in Hyderabad pursuing anyone who could tell me more. Little did I know that this was the beginning of an obsession that would overtake my life for the next five years.

I had long thought about writing a book on the British who went native in India. Beneath the familiar story of British conquest and rule, I believed there lay a far more intriguing and still largely unwritten story about the Indian conquest of the British imagination. During the eighteenth and early nineteenth century it was almost as common for westerners to take on the customs, and even the religions, of India, as the reverse. These White Mughals had responded to their travels in India by slowly shedding their Britishness like an unwanted skin, donning Indian dress, studying Indian philosophy, taking harems, and adopting the ways of the Mughal governing class they slowly came to replace—what Salman Rushdie, in speaking of modern multiculturalism, has called "chutnification." Moreover, the White Mughals were far from an insignificant minority. Wills of the period show that in the 1780s, more than one third of British men in India were leaving all their possessions to one or more Indian wives.

Back in London, I searched around for more about Kirkpatrick. My first real break came when I learned that Kirkpatrick's correspondence with his brother William had recently been bought by the India Office Library. There were piles of letter books, inscribed "From my brother James Achilles Kirkpatrick", the paper all polished and frail with age; great gilt, leather-bound volumes of official correspondence with the Governor General; bundles of Persian manuscripts; boxes of receipts; and, in a big buff envelope, a will—exactly the sort of random yet detailed detritus of everyday lives that biographers dream of.

At first, many of the letters seemed disappointingly mundane: gossip about court politics, requests for information from Calcutta, the occasional plea for a crate of Madeira or the sort of vegetables Kirkpatrick found unavailable in the Hyderabad bazaars. This was all interesting enough, but in many ways unremarkable, and I found maddeningly few references to Kirkpatrick's love affairs. Moreover, much of the more interesting material was in cipher. No sooner did Kirkpatrick begin to talk about his amorous adventures, or the espionage network he was involved in setting up, than the clear and steady penmanship would dissolve into long lines of code.

It was only after several weeks of reading that I finally came to the files that contained the Khair un-Nissa letters. Some of these, it turned
out, were not encoded. One day, as I opened yet another India Office cardboard folder, my eyes fell on the following paragraph written in a small, firm, sloping hand:

The interview when I had a full and close survey of her lovely Person lasted during the greatest part of the night and was evidently contrived by the Grandmother and mother whose very existence hang on hers to indulge her uncontrollable wishes. At this meeting, which was under my roof, I contrived to command myself so far as to abstain from the tempting feast I was manifestly invited to, and though God knows I was but ill-qualified for the task, I attempted to argue the Romantic Young Creature out of a passion which I could not, I confess, help feeling myself something more than pity for. She declared to me again and again that her affections had been irrevocably fixed on me, that her fate was linked to mine and that she should be content to pass her days with me as the humblest of handmaids. Until such time the young ladies person was inviolate but was it human nature to remain proof against another such fiery trial? I think you cannot but allow that I must have been something more or less than a man to have held out any longer.

Then I found pages of cipher that had been overwritten with a translation. The code turned out to be a simple one-letter/one-number correspondence. Once solved, the whole story quickly came together.

Hyderabad in 1800 was a frontier town, a city alive with intrigue and conspiracy, where the British and the French vied with each other for dominance. Soon after Napoleon landed in Egypt and vowed to liberate India from the British, Kirkpatrick had managed to surround and disarm the French in

IN AN ILLUSTRATION, LEFT, KIRKPATRICK IS SHOWN IN TRADITIONAL HINDUSTANI DRESS, WHICH HE WORE TO THE WEDDING OF MEER Dowraun in 1799. THE BRITISH RESIDENCY ON THE NORTH BANK OF THE MUSI RIVER AS IT LOOKED IN 1805, BELOW.
Built at the beginning of the nineteenth century, the former British Residency in Hyderabad is considered one of the earliest and finest examples of classical revival architecture still standing in India. Its importance is based not only on its architectural merit, but for the critical role it played in the relationship between the subcontinent and the British crown. The building, currently owned by the Osmania Women's College, is in dire need of conservation, having suffered from water damage and lack of maintenance. Heavy use and inappropriate repairs have compounded the problem. Since its inclusion on the 2002 list of the 700 Most Endangered Sites, WMF has contributed $100,000—a grant made possible through American Express—to the site to undertake emergency repairs and develop a restoration masterplan for this endangered architectural treasure.

As the scandal spread, Khair un-Nissa’s grandfather threatened to go to the central mosque and raise the Muslims of Hyderabad against the British. Kirkpatrick was ordered by his superiors to stop seeing the girl. Everyone believed the affair was over. What none of the men knew—and of what all the women in the harem were all too aware—was that Khair was three months pregnant.

Before long, Khair’s pregnancy became public and rumors reached the Governor General in Calcutta that Kirkpatrick had raped her. The Hyderabad Prime Minister cut a deal with Kirkpatrick. The Prime Minister would testify to James’s innocence and allow him to marry Khair, but only on the condition that James promise to “strive for the
best interests of the [Hyderabadi] government"—in other words, to become a Hyderabadi agent.

For four years, I beavered away, reconstructing the story through page after page of James’s letters in the India Office Library and returning to Delhi and Hyderabad as often as possible to delve through archives. Inevitably, there were problems. In the vaults of the Indian National Archives in Delhi, someone installing a new air-conditioning system had absentmindedly left all 600 volumes of the Hyderabad Residency Records out in the open. It was the monsoon season, and by the time I returned the following year, most were irretrievably wrecked. Those that were not, were waterlogged and covered with mold. After a couple of days, I was able to arrange for the volumes to be sent off for fumigation but I never saw them again.

Despite such setbacks, the love story began to take shape. It was like watching a Polaroid develop, as the outlines slowly established themselves and the color began to fill in the remaining white spaces. Cleared of the rape charge, James secretly converted to Islam and married Khair. Soon after, Khair gave birth to a son, Sahib Allum ("Little Lord of the World"); and sometime later, a daughter, Sahib Begum ("Lady of High Lineage"). To accommodate his new family, Kirkpatrick began a major building project, the vast Pailadian villa that would be his official Residency, complete with a Capability Brown-style park, sunken hedges, and grazing sheep. Behind, he constructed a Mughal zenana for Khair, built in marble with fountains and Indian wall paintings, as well as a Mughal garden. For four years Kirkpatrick slipped very happily between two worlds. By day, he lived his official British life; in the evening he would slip into his kurta pajamas and join his Mughal wife and Urdu-speaking Muslim family.

Their unlikely arcadia came to an end after five years, when Kirkpatrick decided to send his children to school in Britain despite Khair’s protests. Before their departure, the children had their picture painted by the artist Chinnery wearing Hyderabadi clothes for the very last time. Kirkpatrick, ill with hepatitis, was unable to travel to Madras to see the children off. Upon their arrival in London, the children were baptized Christians and given the names William and Kitty Kirkpatrick. Meanwhile, their father was ordered to travel to Calcutta to brief the new Governor General. During the trip,
Kirkpatrick’s condition worsened. He died in Calcutta, age 43, far from all he loved, and at only 19, Khair was left a widow.

The documents gave no hint as to what had happened to Khair after Kirkpatrick’s death. After nine months of searching, I stumbled across the heartbreaking answer in the Bodleian Library in Oxford. The tale bore a striking resemblance to that of Madame Butterfly.

After a year of mourning, Khair had decided to journey by elephant 1,000 miles across the length of India to visit her husband’s grave in Calcutta. Lonely, despairing, and far from home, she was eventually seduced by the only man she knew in Calcutta, James’ former assistant, Henry Russell.

But Russell was a very different man from James and had refused to marry her. Worse still, when the news of Khair’s seduction by Russell reached Hyderabad, Khair was banished to a scrappy coastal town where she waited in vain for Russell to join her. Russell, however, had other plans, marrying a young British heiress in Madras. Khair, brokenhearted, wasted away. She was allowed back into Hyderabad to die where she had once been happy: in the zenana of the Residency that James had built for her years earlier.

The final twist in the story takes place 40 years later. A few weeks before I began writing, family papers belonging to the great-great-great-grandson of Kirkpatrick and Khair un-Nissa turned up a couple of miles from my home in West London. These letters extended the story through to the no less remarkable tale of Khair and James’s daughter, Kitty Kirkpatrick.

After leaving Hyderabad, Kitty had been completely cut off from her maternal relations. She had been absorbed into the upper echelons of Victorian literary society, where she had fascinated her tutor, the young Thomas Carlyle, and formed the basis for the heroine Blumine in Carlyle’s celebrated novel Sartor Resartus. One day, in May 1841, while visiting friends in the country, Kitty was taken to tea in a stranger’s house. She walked in the door and promptly fainted. On the wall was the Chinnery portrait of her and her brother painted in Madras when she was four.

The house belonged to Henry Russell, who had retired to England with a corruptly acquired fortune and a baronetcy. Curious how her portrait wound up in the house, Kitty began to investigate the history of the painting. In the process, she discovered the truth about her mother’s end, and also learned her grandmother was still alive aged 85 in a Hyderabad harem. The two began an emotional correspondence—Kitty writing on Basildon Bond from Torquay; her grandmother responding in script illuminated with gold leaf. Kitty wrote:

“I often think of you and remember you and my dear mother. I often dream that I am with you in India and that I see you both in the room you used to sit in. No day of my life has ever passed without my thinking of my dear mother. When I dream of my mother I am in such joy to have found her again that I awake, or else am pained in finding that she cannot understand the English I speak. I can well recollect her cries when we left her and I can now see the place where she sat when we parted, and her tearing her long hair—what worlds would I give to possess one lock.”

Her grandmother responded in Persian, enclosing a lock of Khair un-Nissa’s hair she had kept all that time for Kitty: “Fresh vigor was instilled into my deadened heart and such immeasurable joy was attained by me that it cannot be brought within the compass of being written or recounted.”

Although they planned to meet, Sharaf un-Nissa died on the eve of the Indian Mutiny, never seeing her granddaughter again. Seventy-five years after the death of James Achilles Kirkpatrick, Rudyard Kipling wrote, “East is East and West is West and never the twain shall meet.” Yet, the story of the White Mughals provides a timely reminder that it is indeed possible—and has always been possible—to at least make the effort to reconcile two very different worlds.
THE ARCHITECTURE PACK:
A Three-Dimensional Tour of Architecture Over the Centuries
BY RON VAN DER MEER AND DEYAN SUDJEK • ALFRED A. KNOPF • $55

From the work of the Old Kingdom architect Imhotep, designer of Djoser's step pyramid at Saqqara, Egypt, to the visionary projects of Richard Meier and I.M. Pei, The Architecture Pack traces the development of ideas, construction techniques, and materials through a fantastic array of pop-up, pull-out, and stand-alone images of some of the world's greatest buildings. Special sections detail everything from dome construction and classical notions of proportion to the tensile strength of modern materials. Particularly spectacular are the pop-up renditions of Chartres Cathedral and the Sydney Opera House. —AMHS

WHY BUILDINGS FALL DOWN: How Structures Fail
BY MATTHYS LEVY AND MARIO SALVADORI • W. W. NORTON • 346 PAGES • $14.95

The engineer-authors of this often-riveting study explain, in laypeople's terms, the suspected causes of lethal collapses through the ages: of skyscrapers, convention halls, highways, dams, churches, and just one Egyptian pyramid. Domino effects—of human error or evildoing compounded by metal fatigue, undetected corrosion, and/or natural cataclysms—are typically to blame. Weak hanger bolts, for instance, popped and set off a chain reaction that felled Kansas City's Kemper Arena in 1979 (just hours after an architects' convention closed), and the 1989 implosion of Pavia's 1,000-year-old Civic Tower was probably due to decrepit original mortar, air-pollution damage, and vibrations from road traffic and the belfry's own bell. As for that Egyptian pyramid at Meidum—unlike all its contemporaries—it was set on desert sand rather than limestone bedrock. This book, in print since 1992, has been updated with details of why columns melted and floors pancaked at the World Trade Center. —EVE KAHN

LAVOIRS: WASHHOUSES OF RURAL FRANCE
BY MIREILLE RODDIER • 88 PAGES • $24.95

Built in even the remotest French villages as early as the 12th century, lavoirs—public laundry pavilions—were once civic status symbols. Communities flaunted their wealth, sophistication, and hygiene with these sheltered troughs, which kept soapsuds and gray water out of the potable supply. Famous architects like Claude-Nicolas Ledoux designed the miniature colonnaded temples, sometimes incorporating them into the bases of town halls (lavoir-mairies, the hybrid buildings were dubbed). The washhouses became social centers as well, where laundresses argued politics and commiserated over each other's husbands. Made obsolete by modern plumbing, the structures have been razed by the score. A few dozen are designated monuments historiques, mostly idle and mothballed, their still pools mirroring only pillars and vaults. Architect/historian/artist Mireille Roddier has lovingly photographed some 50 examples throughout France, in duotones that capture every algae speck and dusty sunbeam. —EVE KAHN

ARCHAEO-VOLUNTEERS:
The World Guide to Archaeological and Heritage Volunteering
EDITED BY ERIN MCCLOSKEY • GREEN VOLUNTEERS/UNIVERSE PUBLISHING • 256 PAGES • $14.95

This book's 171 program listings encompass everything from a stegosaurus excavation in Montana, to windmill restorations in the Bahamas, to a Russian ethnography project among reindeer hunters. Volunteers can spend days or months onsite, whether hauling sherds, analyzing petroglyphs, or cutting reeds for thatch-roof replicas. Some sites pay their working guests with room and board (typically in tents), while others charge up to $5,500 for a summer's training. Since some of the guide's data will inevitably soon be out of date, programs' websites are listed along with dozens of web links to hundreds more fieldwork options. —EVE KAHN
GHOST TOWNS OF THE AMERICAN WEST
BY BERTHOLD STEINHILBER • 112 PAGES • $29.95

German photographer Berthold Steinhilber trains spotlights on ghost towns at twilight, then leaves his camera lenses open for hours. The eerie resulting images somehow give the ruins dignity, almost glamour, a moment back in the limelight. Smithsonian commissioned the 80 photos in this book, taken in 19 towns in six states. The skeletal structures depicted range from shanties to towering mine-winning shafts to masonry civic buildings once furnished in marble and mahogany. A few of the communities seem to have been abandoned in a hurry, with cars stalled on the lawns, schoolbooks still open in the classrooms, and gambling chips piled by the roulette wheels. Detailed and poetic captions for each picture explain how the towns rose and declined, and who were the last to leave.
—EVE KAHN

CENTRAL PARK, AN AMERICAN MASTERPIECE:
A Comprehensive History of the Nation's First Urban Park
BY SARA CEDAR MILLER • 256 PAGES • $45

The deadline for competition entries had already passed in spring 1858 by the time Calvert Vaux and Frederick Law Olmsted, then-fledgling landscape architects, handed in their proposal for some 843 acres in Manhattan. The partners' design won handily, over 32 more timid schemes full of topiary and flowerbeds. Vaux and Olmsted envisioned recsculpting the swampy terrain naturalistically and crisscrossing it with pedestrian paths, sunken roadways, and one formal allée lined in elms. Though they continually compromised while realizing their plans over the next decades, their basic layout is astonishingly intact. Their fanciful architectural details—Gothic spires, rustic bridges, stone balusters carved with American flora—have also been largely well-respected. This volume was published as part of the park's 150th-anniversary celebration (the state legislature officially designated the site as a park in 1853). For nearly every landscape feature, Sara Cedar Miller, the Central Park Conservancy's photographer and historian, offers lively background anecdotes. About the Sheep's Meadow alone, she notes that Dorset and Southdown sheep once trimmed its lawns—aided by zoo camels pulling mowers—while living with their shepherd in a Minton-tiled brick barn, now known as Tavern on the Green.
—EVE KAHN

WESTMINSTER ABBEY: THE COSMATI PAVEMENTS
EDITED BY LINDY GRANT AND RICHARD MORTIMER • 141 PAGES • $89.95

The floor of Westminster Abbey is contentious: scholars disagree over why its polychrome marble tapestry was installed, by whom, and when. This volume's six essays, based on a 1998 conference organized by the Abbey and the Courtauld Institute, lay out all the contradictory evidence. What's certain is that Westminster owns England's finest example of Cosmati work, a Roman masonry technique fashionable throughout medieval Europe. Sometime around 1260, Westminster's abbot hired Italian craftsmen to inlay loops, stars, and checkerboards at the base of the high altar. For raw material, they salvaged colorful marble from classical ruins. Was the work finished in time for Henry III's celebrations of the Abbey's rebuilding in 1269, or for his tomb construction in 1280? Do the patterns symbolize cosmological phenomena, or are they just exuberant abstractions? Which chief artist is named in the faded Latin inscriptions woven through the design? And which fragments are original, and which the results of clumsy later renovations? Preservationists are now stabilizing and repairing the pavement, the authors add. And all efforts this time are being scrupulously documented, to avoid further clouding its history.
—EVE KAHN

AUSTRIAN ART-O-MAT?
In an ingenious move to share the pleasures of art and architecture with the wider audience, Art Traffic, a division of Triton Verlag, has launched a series of microbooks sold via vending machines around Vienna. The illustrated guides to the city's cultural institutions—in English and German—offer fold-out maps complete with names and numbers. "Our aim is to make information available to anyone who is curious," says series editor Alexandra Wachter of Art Phalanx (www.artphalanx.at), who hopes the idea will catch on in cultural centers around the world.

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.
Although the mercury outside hovered around 32° C, the ornate rococo rooms within the magnificent eighteenth-century Chinese Palace at Oranienbaum, 40 kilometers west of St. Petersburg, provided a cool respite from the extreme heat. As WMF's director for Russian projects, I had been dispatched to the imperial capital to provide HRH the Prince of Wales with a behind-the-scenes tour of WMF in Britain's ongoing and much-needed restoration of Catherine the Great's "personal dacha." Commissioned by the tsarina in 1762, the fabulously voguish interiors were the work of the Italian architect Antonio Rinaldi. Over the centuries, however, they had fallen prey to lack of maintenance and rising groundwater. And, until this summer, the roof was leaking in many places.

Prince Charles has a special regard for St. Petersburg; his first trip here in 1994 made him the first British royal to visit the city since the revolution of 1917. Given the Prince had received more than 170 requests for audiences during his two-day visit, we were particularly honored that he chose to include a tour of our project on his agenda. During his visit, I was able to point out the emergency repairs that we had just completed to the palace's roof, downpipes, and drainage. It was clear from our conversations that he had a great appreciation for the building, no doubt one of the greatest surviving achievements in Russian architecture. At the end of his tour, the Prince paused by the exit for a brief moment, then commented, "I'm never sure when I can return so I'd like to soak up the atmosphere here a bit longer." He then headed back inside.

—WILL BLACK
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