



A lush tropical forest with a stone staircase leading up a hillside. The scene is filled with vibrant green foliage, including ferns and various trees. The stone steps are built into the natural terrain, and the overall atmosphere is one of a well-preserved natural environment.

# Maya Marvels at Risk

by ANGELA M.H. SCHUSTER

## WMF LAUNCHES A PROGRAM TO PRESERVE AN EXTRAORDINARY CULTURAL LEGACY

The noonday sun beams down on us as our *lancho*, Gabriel Maldonado, artfully slips our boat between boulders and raging whirlpools. It is the last patch of class II whitewater we will encounter before reaching the 1,500-year-old Maya city of Piedras Negras, the remains of which blanket a two-kilometer-long stretch of rugged terrain on the eastern shore of the Usumacinta, the largest and longest river in Mesoamerica and the natural border between Guatemala and the Mexican state of Chiapas. With one swift gun of the 75hp engine, he brings the craft about, gently nosing its bow into a steep, soft sandbank where we unload our gear in preparation for an afternoon of exploration.

Our visit to this ancient city marks the third stop on a whirlwind journey that has taken us—Norma Barbacci, WMF’s director for Latin American field projects; Ken Feisel, ICON’s cre-

ative director and an intrepid photographer; and I—throughout the Petén region of Guatemala to check on the progress made at a suite of sites WMF is currently working to preserve. Joining us for this leg of our trip is Javier Marquez of Defensores de la Naturaleza, a Guatemala City-based NGO that manages the Sierra del Lacandón National Park—the rainforest preserve in which Piedras Negras is located—and one of WMF’s partners in supporting conservation work at the site.

Marquez knows the park well, having served as chief ranger here before assuming his current post as park director a year and a half ago. As we make our way along a narrow path, troops of howler monkeys scamper in the forest canopy, their cacophonous chorus echoing through the jungle. Marquez is quick to point out fresh jaguar tracks and a variety of exotic plants, among them the Tepejilote palm. Our boat crew gathers



**NAMED FOR THE STONE MASKS THAT GRACE ITS FAÇADE, THE TEMPLE OF “EL MASCARON” (AKA K5) AT PIEDRAS NEGRAS WAS BUILT CA. A.D. 677. THE TEMPLE, ABOVE, AS IT LOOKS TODAY FOLLOWING STABILIZATION, AT LEFT AS IT LOOKED IN 2002, AND BELOW, AS IT APPEARED SHORTLY AFTER THE UNIVERSITY OF PENNSYLVANIA EXCAVATED IT IN THE 1930S.**



COURTESY UNIVERSITY OF PENNSYLVANIA

the male inflorescences of the plant, a highly prized delicacy known locally as *pacaya*, for our evening’s dinner.

For centuries, Piedras Negras vied for mercantile control of this vast waterway with its long-time rival Yaxchilán, sited atop an idyllic oxbow on the Mexican side of the Usumacinta, nearly 40 kilometers upstream. Evidence of the city’s prosperity abounds in the fallen stelae and collapsed remains of once-grand buildings with graceful corbel arches and ornate moldings that rise out of dense vegetation. We soon come upon a clearing, where archaeologists and conservators have been working to stabilize and consolidate one of the site’s most famous buildings, known in the archaeological literature as K5—or El Mascarón—after the giant stone masks that grace its multi-tiered façade.

First excavated by the University of Pennsylvania Museum in the 1930s, Piedras Negras has yielded abundant information on the Maya civilization, which flourished during the first millennium A.D. in what are now the modern nations of Mexico, Guatemala, Honduras, Belize, and El Salvador. Here, the Maya built great cities with monumental architecture—pyramids, temples, palaces, and ballcourts—connected by a vast network of roads

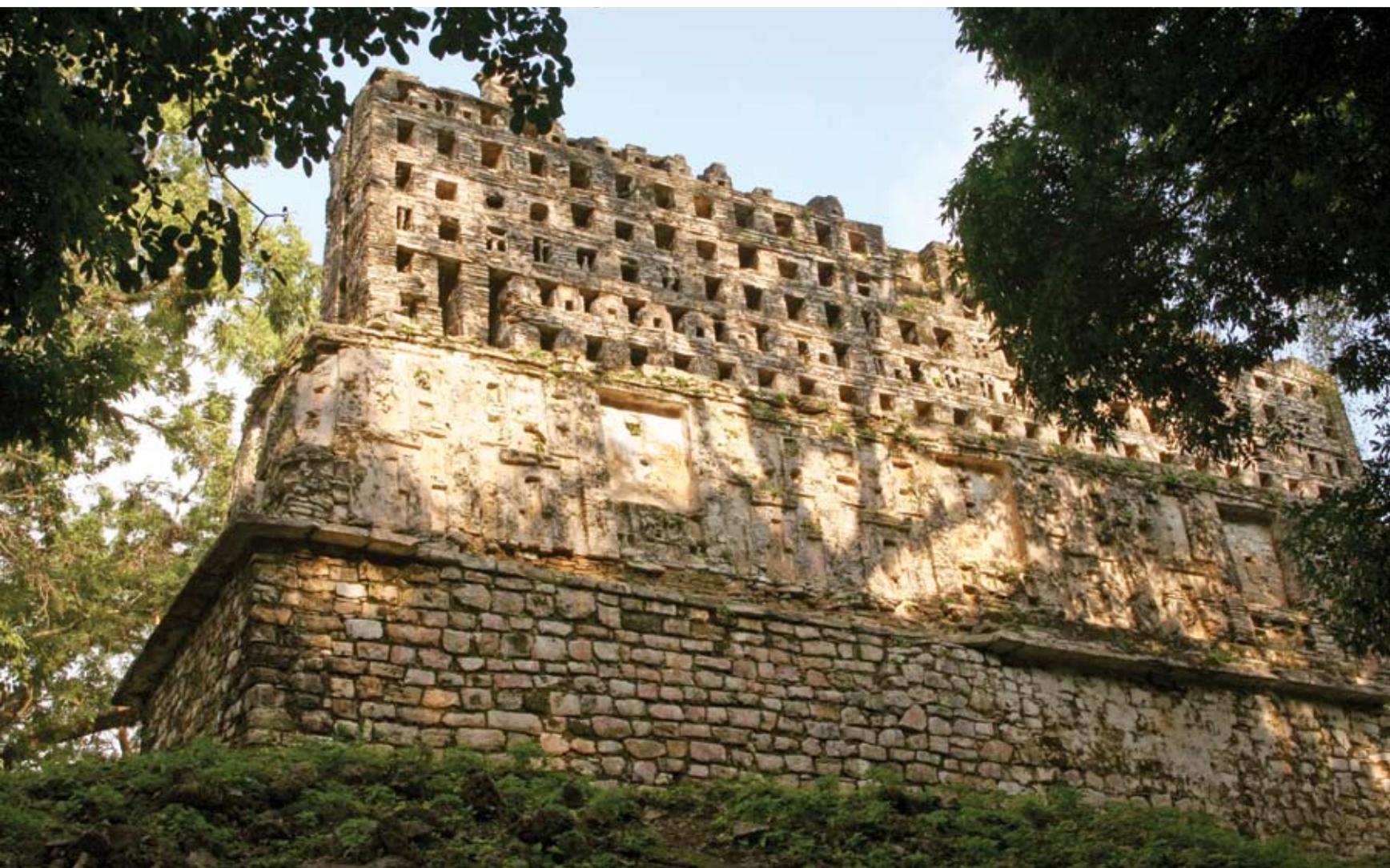
and rivers. Today, the remains of their civilization can be found in the hundreds of archaeological sites that dot the region's landscape. Stylistically varied in their architecture and urban design and disparate in their natural settings, these sites collectively speak volumes about one of the greatest civilizations the New World has known, making their preservation all the more important.

For conservators, Piedras Negras presents a special set of problems. Beyond damage wrought by the passage of time and exuberant vegetation, many of its buildings, including El Mascarón, were laid bare at a time when preservation did not go hand in hand with excavation, resulting in structural instability prompted by a failure to backfill trenches. Until recently, simply working at the site proved difficult, Piedras Negras being located in an area controlled by leftist guerrilla forces. Although the protracted struggle between the government of Guatemala and pro-Native American groups officially ended in April 1995, debate over land ownership has continued.

I am amazed at the work that has been carried out at the site in recent years, particularly in the West Group where K5 is located. When I last visited Piedras Negras on assignment for *ARCHAEOLOGY* magazine more than a decade ago, buildings in this part of the site were all but illegible without the aid of architect Tatiana Proskouriakoff's extraordinary drawings made shortly after the Penn excavations. I am also relieved to see stabilizing fresh fill placed within a number of the early trenches by archaeologist Stephen Houston of Brown University and Héctor L. Escobedo of the Universidad de San Carlos, who have been exploring the site since reopening excavations here in 1997.

Beyond supporting conservation work at the individual site level, WMF's Maya preservation program—carried out with partners drawn from academic institutions, the private sector, and government agencies—seeks to address a range of issues from environmental policy and sustainable development to site interpretation and tourism management. “While carrying out on-site conservation at places such as Piedras Negras is our main priority,” says Norma Barbacci as we hike up to the West Acropolis, “it has become clear that our efforts may be fruitless if they are not undertaken within a larger context—one that looks at the overall environmental condition of a

**LADY IK'-SKULL, MOTHER OF YAXCHILÁN KING BIRD JAGUAR IV, IS DEPICTED ON STELA 35 AT THE SITE. BUILT IN THE MID-EIGHTH CENTURY A.D., YAXCHILÁN'S FAMED TEMPLE 33, BELOW, HISTORICALLY ATTRIBUTED TO THE SAME KING, MAY HAVE BEEN COMMISSIONED AS A MEMORIAL BY HIS SON, SHIELD JAGUAR III.**





# WMF in the Maya World

When the ancient city of El Pilar in far western Belize became the first Maya site to be included on WMF's biennial List of 100 Most Endangered Sites in 1996, the organization began amassing a portfolio of sites that represent the full range of architectural expression and the conservation challenges facing such ancient remains. While some Maya sites such as Chichén Itzá in Mexico, Copán in Honduras, and Tikal in Guatemala have been excavated, consolidated, and opened to the public on a grand scale, others continue to languish, engulfed in exuberant and often destructive vegetation, or have been ravaged by time, pillaged by looters, and threatened by industrial development. Many have suffered as a result of uncontrolled tourism, poor site management, inappropriate restoration, and, in some cases, wholesale reconstruction.

Today, on the eve of publication of WMF's 2008 List of 100 Most Endangered Sites—slated for release later this spring—more than a dozen Maya sites have entered the portfolio, prompting WMF to launch a new initiative, the goal of which is to develop a comprehensive strategy for preserving this extraordinary cultural legacy. For more information on these ancient cities and WMF's efforts to save them, visit our website at [wmf.org](http://wmf.org).



## AKÉ

Although Aké was occupied for more than a millennium (ca. A.D. 250–1450), the majority of its visible remains—which are spread over more than two square kilometers and include the impressive Structure 1, at right—date to the Early Classic Period (A.D. 250–600). A preliminary

WMF-funded conditions assessment has been carried out to establish conservation priorities and develop an appropriate plan for public access and presentation of the site, which at present is off the beaten path.



## CHICHÉN ITZÁ

Built between A.D. 850 and 1200, Chichén Itzá hosts more than a million tourists a year, a visitor load that takes its toll on the site. Wear and tear on the archaeological remains is particularly evident in the so-called Castillo—first restored by the Carnegie Institution in the 1920s and

again by INAH in the 1980s—which was closed in to the public in spring of 2006 due in part to structural instability. WMF has carried out a preliminary conditions assessment, which will enable conservators to prioritize their future work at this architectural jewel.

## KABÁH

The remains of Kabáh, built between A.D. 800 and 1000, currently straddle Highway 261, which was cut through the Late Classic Puuc site in the early nineteenth century. Among the site's most impressive buildings is the Codz-Poop, or Palace of the Masks, the façade of which is adorned with hundreds of masks depicting Chac, the rain god. While its roofcomb was restored in 1991, the rest of the structure remains at risk. Current plans call for stabilization of the Codz-Poop, as well as rerouting of the highway to restore the integrity of the site.



## LABNÁ

The Puuc-style site of Labná, dated A.D. 650–1000, has a number of notable structures, including a Palace and the Arch, pictured at right. In 1991, INAH launched a comprehensive documentation project at the site, which included limited reconstruction of several buildings in order to understand its architecture. Today, however, many structures still need stabilization and consolidation, as well as conservation of finishes, some of which are threatened by biological growth resulting from water infiltration.

## NARANJO

With the majority of its monumental architecture cloaked in jungle, Naranjo, occupied between ca. A.D. 400 and 830, has yet to be developed as a tourist destination. However, this may change with the construction of a new road. Despite the fact that the site has been pillaged for its polychromed ceramics and free-standing monuments, Naranjo offers an excellent opportunity to present a vast Maya site in its natural setting. WMF is working with its site director to develop a holistic management plan and interpretation program for Naranjo.



## PIEDRAS NEGRAS

Sited on the Guatemalan side of the Usumacinta, Piedras Negras is the largest Classic Maya city in the western Lowlands. Although the site was founded in the fourth century A.D., most of what we see today dates to the seventh and eighth

centuries. Since 2002, WMF has sponsored conservation work in the so-called West Group, its buildings weakened by the passage of time and a failure to backfill archaeological trenches during excavations in the 1930s. Current work includes completion of the stabilization of the K5 temple and carrying out a comprehensive conditions assessment for the whole site.



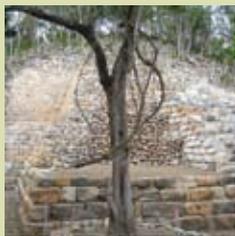
### SANTA ROSA XTAMPAK

One-time capital of the Chenes area of Campeche, the 1,500-year-old site of Santa Rosa Xtampak has one of the most architecturally interesting Maya buildings, a palace with two internal staircases that spiral up three stories. With private funding, INAH has been excavating the site

and consolidating the most important structures. Much remains to be done to arrest the decay of exposed limestone elements and polychromed stucco interiors.

### TECOLOTE

Thought to have been a political ally of Yaxchilán and one of more than a dozen sites recently documented with WMF support in a swath of land between Yaxchilán and Piedras Negras, Tecolote faces certain destruction if the Usumacinta is dammed (see *ICON*, Summer 2003). Much of the site, dated A.D. 600–900, has been heavily looted. However, Structure 1, one of seven vaulted buildings noted at the site, contains the remains of polychromed murals that await conservation.



### XOCNACEH

Founded ca. 500 B.C., a millennium before its neighboring sites in the Yucatán, the recently discovered site of Xocnaceh is altering our understanding of the earliest period of Maya civilization and its connection to that of the Olmecs, long thought to be its cultural predecessor.

The site, which is not yet open to the public, has one of the largest surviving structures from the Preclassic period in Mesoamerica. A preliminary WMF-funded conditions assessment has been carried out, and plans for conservation and interpretation are underway.

### YAXCHILÁN

Built between A.D. 359 and 810, Yaxchilán boasts numerous edifices with fretted roofcombs and walls, lintels, and stelae with finely carved reliefs. Biological growth and instability wrought by rain and erosion plague many buildings. WMF has underwritten conservation work, training workshops, and a study to assess the impact of dam construction on the site and others along the Usumacinta. WMF is working with the Commission of Protected Areas and INAH to develop a management plan for the site and its surrounding environment. In addition, a new method of monument documentation sponsored by WMF and carried out by Harvard University's Corpus of Maya Inscriptions project is being tested at the site.



**A LINTEL, WHICH GRACES A DOORWAY OF YAXCHILÁN TEMPLE 20, DEPICTS LADY GREAT SKULL, THE WIFE OF BIRD JAGUAR IV, AND HER BROTHER ENGAGED IN BLOOD-LETTING RITES.**

site and the needs of the communities around it, a case in point being Yaxchilán.”

According to Barbacci, the site, which we are to visit later in the week, was in dire need of conservation and maintenance when it was included on WMF's 2000 Watch List. Yet Yaxchilán—along with Piedras Negras, which was placed on the List in 2002—faced a far more pressing threat: destruction by inundation if proposed plans to build a hydroelectric dam on the river were carried out. “The notion of harnessing the waters of the Usumacinta for hydroelectric power is an idea that had been kicking around in one form or another since the late 1940s,” says Barbacci. “However, it wasn't until Vicente Fox's administration that it seemed to gain any momentum, being one of several large infrastructure projects included in his Plan Puebla Panama, an ambitious scheme to stimulate economic development not only in Mexico but throughout Central America.” Since then, she says, a variety of proposals from dams to subaquatic turbines have been put forth.

“Knowing the destructive potential of such a project, we commissioned a study to assess the impact of a whole range of schemes (see *ICON*, Spring 2005). What was particularly alarming was that beyond damaging Yaxchilán and Piedras Negras, waters would flood a vast area between the ancient cities, a little-explored swath of land rich in cultural remains.”

“We knew from inscriptions that the stretch of the Usumacinta between these vast urban centers was densely settled,” says Charles Golden of Brandeis University, who, with WMF support, has spent the past four field seasons bushwacking his way through the area, documenting the locations of more than a dozen previously unknown sites in the process. He has also found the remains of a wall system demarcating a clear political



**THE EXTRAORDINARY WATERFALLS AT BUSIL HA, JUST NORTH OF PIEDRAS NEGRAS ON THE USUMACINTA, ABOVE. ONE OF THE NEWER MEMBERS OF THE WELCOMING COMMITTEE, LEFT, WHICH GREETES TRAVELERS BOUND FOR PIEDRAS NEGRAS. A SECURE STORAGE AREA**

**AT THE FAMED MAYA SITE OF TIKAL, BELOW, HOUSES NUMEROUS ARTIFACTS SALVAGED FROM PIEDRAS NEGRAS. A VIEW OF YAXCHILÁN'S GRAND PLAZA LOOKING NORTH, BOTTOM.**



boundary between the two cities. "What is interesting," he says, "is that we have discovered material at each of the new-found sites that tells us which of the two cities controlled them, information that will have a major impact on the field of Maya studies. It is also information that is sure to be lost if the proposed dam or series of dams is constructed."

While plans to dam the Usumacinta appear to be on hold for the moment, Barbacci and others take little comfort, noting that Mexico's current president, Felipe Calderón, was head of the country's federal energy commission under the Fox administration, at which time he endorsed exploitation of the river for hydroelectric power.

In recognition of the looming environmental threats to the cultural heritage in the region, WMF included the whole of the Usumacinta Cultural Landscape on its 2004 Watch List. Since then, the organization has continued to underwrite much-needed conservation and documentation work at both Yaxchilán and Piedras Negras and sponsor training workshops for guards and maintenance crew from the sites. "We have also met with the communities that live in the shadows of these great ruins and make their living from them," says Barbacci, adding that in addition to tourism, many local inhabitants—descendants of the people who built the cities—draw their livelihood by tending small plots in and around the remains often through slash-and-burn agriculture. "We are doing what we can to save these sites from every possible angle."

This more holistic approach to site conservation has become a hallmark of WMF's work in recent years, resulting in a number of partnerships with environmental groups such as Defensores de la Naturaleza—which is as concerned about dwindling jaguar populations as it is about sublime ruins of architectural masterpieces—and the Nature Conservancy, with whom WMF hopes to collaborate at Naranjo in the western Petén, the most recent site to enter the Maya portfolio. To underwrite the new initiative, WMF has enlisted the help of several of its corporate partners who have an interest in the region. Contributions from companies such as American Express and Banamex, Mexico's largest bank, have complemented those of stalwart supporters of the organization's work in the area—among them Robert W. Wilson, Bernard Selz, the Ildiko and Gilbert Butler Foundation, the Klein Foundation, and the J.M. Kaplan Fund.

"It was Banamex that first approached us with the idea of forging a partnership with its philanthropic division, Fomento Cultural Banamex, the government of Yucatán, and Mexico's Instituto Nacional de Antropología e Historia (INAH)," says Barbacci of a program launched in 2005 to carry out restoration at several important Maya sites in that state—among them the Puuc-style cities of Chichén Itzá, Kabah, Labná, and Aké, and the recently discovered Middle Preclassic (500–300 B.C.) site of Xocnaceh—as well as the 1,500-year-old city of Santa Rosa Xtampak in the state of Campeche.

"Our investment in safeguarding cultural patrimony is a major part of a company-wide campaign to improve the overall quality of life for the people of Mexico and preserve our heritage for future generations," says Roberto Hernández, co-chairman of Fomento Cultural Banamex, noting that since 2000, his organization has partnered with a number of public and private institutions not only to carry out restoration work but to underwrite archaeological investigation and improve site infrastructure and visitor services, as well as outreach efforts of on-site museums.

"While sites in the Petén have suffered as a result of decades of civil unrest and a host of ecological problems related to slash-and-burn agriculture," says Barbacci, "those in the Yucatán tend to face somewhat different issues, namely those of tourism management and site interpretation." With its relative ease of access, the Yucatán Peninsula has become a favored destination, particularly for North American travelers, with sites such as Chichén Itzá seeing more than a million visitors a year.

"Chichén is a great revenue generator for the region," says Barbacci, "yet



only a small percentage of the gate actually goes back to the site to underwrite its conservation and maintenance.” Wear and tear is particularly evident in the Temple of the Warriors and the site’s most famous building, the 30-meter-high Castillo, which was officially closed to the public in March 2006 due in part to structural instability. As of this writing, several conservation projects have been proposed for the site, including carrying out a detailed conditions assessment of many of the monuments and the drafting of a regular maintenance plan to prevent further damage.

Unlike Chichén Itzá, the Late Classic Maya site of Naranjo in the eastern Petén near the Belize border has yet to witness systematic excavation, much less experience an onslaught of visitors. But this may soon change if current plans to open a road into the site materialize. Today, reaching Naranjo entails a rodeo-esque journey—two hours on horseback or an hour by ATV—through a *bajo*, a lowland bog rich in flora and fauna.

Although the site has been heavily looted—stripped of nearly all of its freestanding stelae and altars—its buildings on the whole remain cloaked in jungle. And that is just the way Vilma Fialko, the archaeologist in charge of the site, would prefer to leave it if the site is opened to tourism. “We have a unique opportunity to selectively excavate representative buildings or portions of buildings while preserving the remains in their natural setting,” Fialko told us when we visited the site earlier in the week. During our foray to Naranjo, Fialko shared with us her vision of presenting the site as a “Maya garden” in which ancient ruins could be admired alongside exotic birds, rare orchids—of which more than a dozen new species have been identified at the site—and medicinal plants used by the ancient and modern Maya that are native to the site’s watery environment.

As we make camp at El Porvenir, a temporary army base and ranger station a three-kilometer hike north of Piedras Negras, we reflect on the dramatic progress made at that site and the potential the future holds for untapped sites such as Naranjo. “For us,” says Barbacci, “conservation is not just the buildings themselves but the natural environment that embraces them and the demands made upon it, both locally and globally. In this context, the potential economic value of cultural heritage conservation extends well beyond the physical domain of a site to include sustainable local development.” For Barbacci and her colleagues, finding a way to preserve the environment in concert with non-destructive forms of job creation are essential elements of the preservation process. ■

**A JUNGLE-CLOAKED TEMPLE KNOWN AS C-4 AWAITS CLEARING AND INTERPRETATION AT THE UNTAPPED SITE OF NARANJO IN THE PETÉN REGION OF GUATEMALA.**