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Author(s): John B. Carlson

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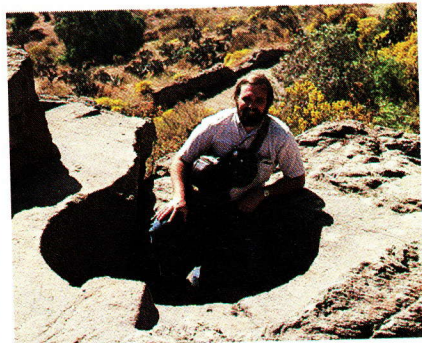
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STAR WARS OF ANCIENT MEXICO



STAR WARS OVER TEOTIHUACAN



John B. Carlson examines an Aztec bath at Tetzcotzingo, Valley of Mexico.

THERE WAS A TIME WHEN ARCHAEOASTRONOMY, the anthropological study of sky lore, mythologies, cosmologies, and astronomical practices of ancient peoples, was discounted by many scholars as an unreliable source of data. Then, beginning in the 1970s, a number of breakthroughs in our understanding of Native American astronomy began to yield tangible results. It was discovered that the Maya, once thought to be a peaceable people, were apparently

quite warlike, and fought ritual battles with neighboring kingdoms timed to the cycles of Venus, their god of war, water, and fertility. In addition to warfare for conquest, some battles were organized so warriors could simply prove their prowess while obtaining captives for ritual executions.

"Astrologically timed battles involving the planet Venus," the archaeoastronomer John Carlson has written, "explain the presence of the Venus glyph within the 'shell star' or war glyph of Classic Maya inscriptions. A picture of the astrology of Classic Maya ritual warfare had emerged with Venus as the chief protagonist."

Carlson's cover story, beginning on page 58, explores the Venus-related cult of sacred ritual warfare and associated human sacrifice as practiced at Teotihuacan, a vast and brooding collection of pyramids and temple ruins 35 miles northeast of Mexico City. Until now scholars have been baffled by the rise and particularly the fall of Teotihuacan. The tombs of its rulers have never been found, there is little surviving sculpture to guide us, and although we know the Teotihuacanos were in contact with the fully literate Maya, no linear texts have surfaced. Nonetheless, Carlson contends that recent excavations at the site provide critical support for his hypothesis that "a pan-Mesoamerican tradition of Venus-inspired sacred warfare and ritual sacrifice was alive and well at Teotihuacan and that the presence of the cult provides a new dimension to our understanding of the rise of this enigmatic civilization as well as its precipitous and violent collapse."

Carlson, now director of the Center for Archaeoastronomy in College Park, Maryland, started out as an extragalactic astronomer. He visited Teotihuacan as a tourist in 1973, and was so stunned by the experience that he began to combine his expertise in astronomy with his new interest in archaeology at a time when the discipline of archaeoastronomy was being born. Says Carlson, "I stepped across into the parallel universe of ancient astronomy and never looked back."

Peter A. Young

Peter A. Young
Editor-in-Chief

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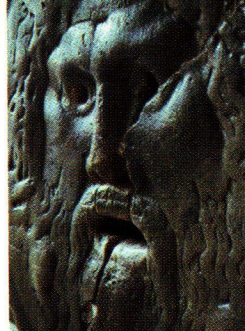
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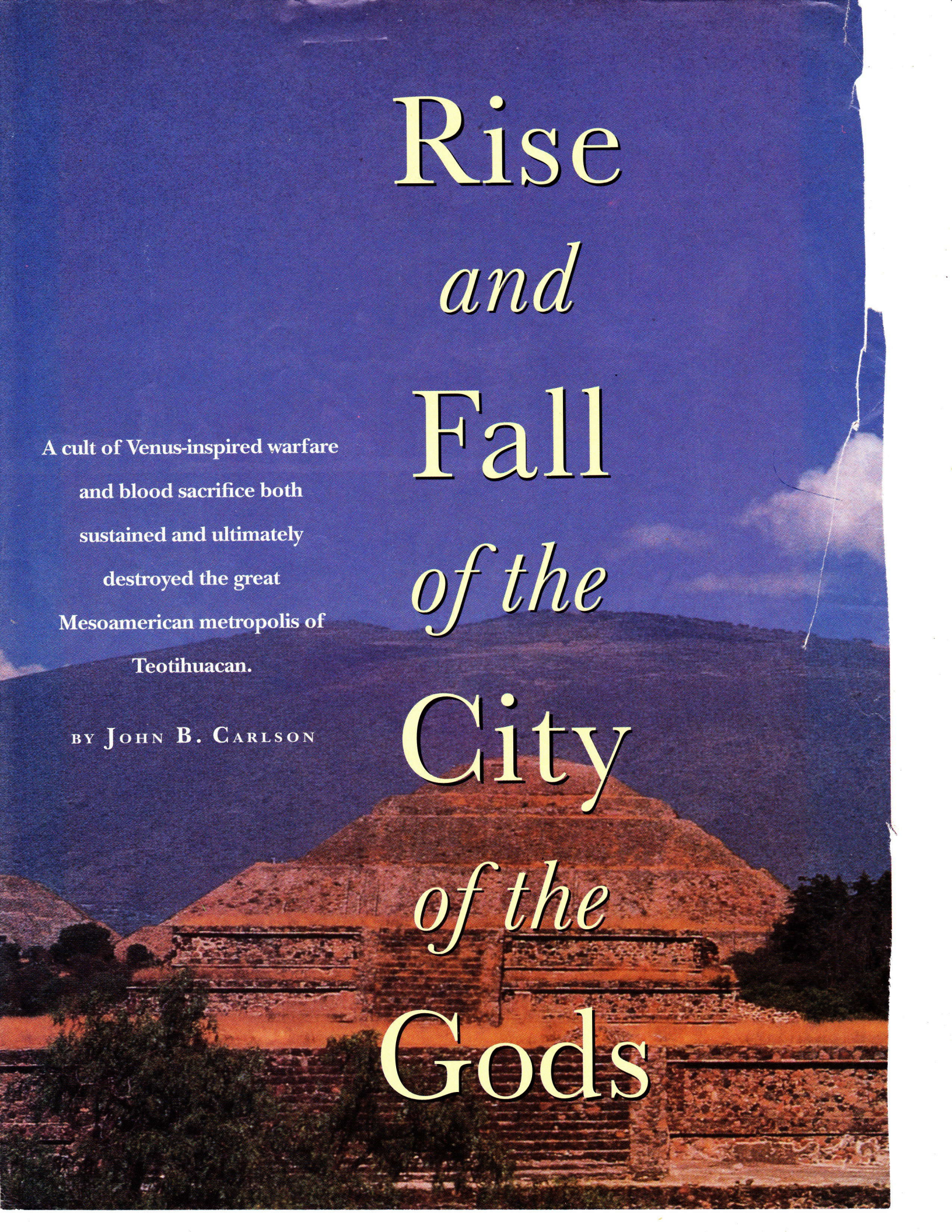
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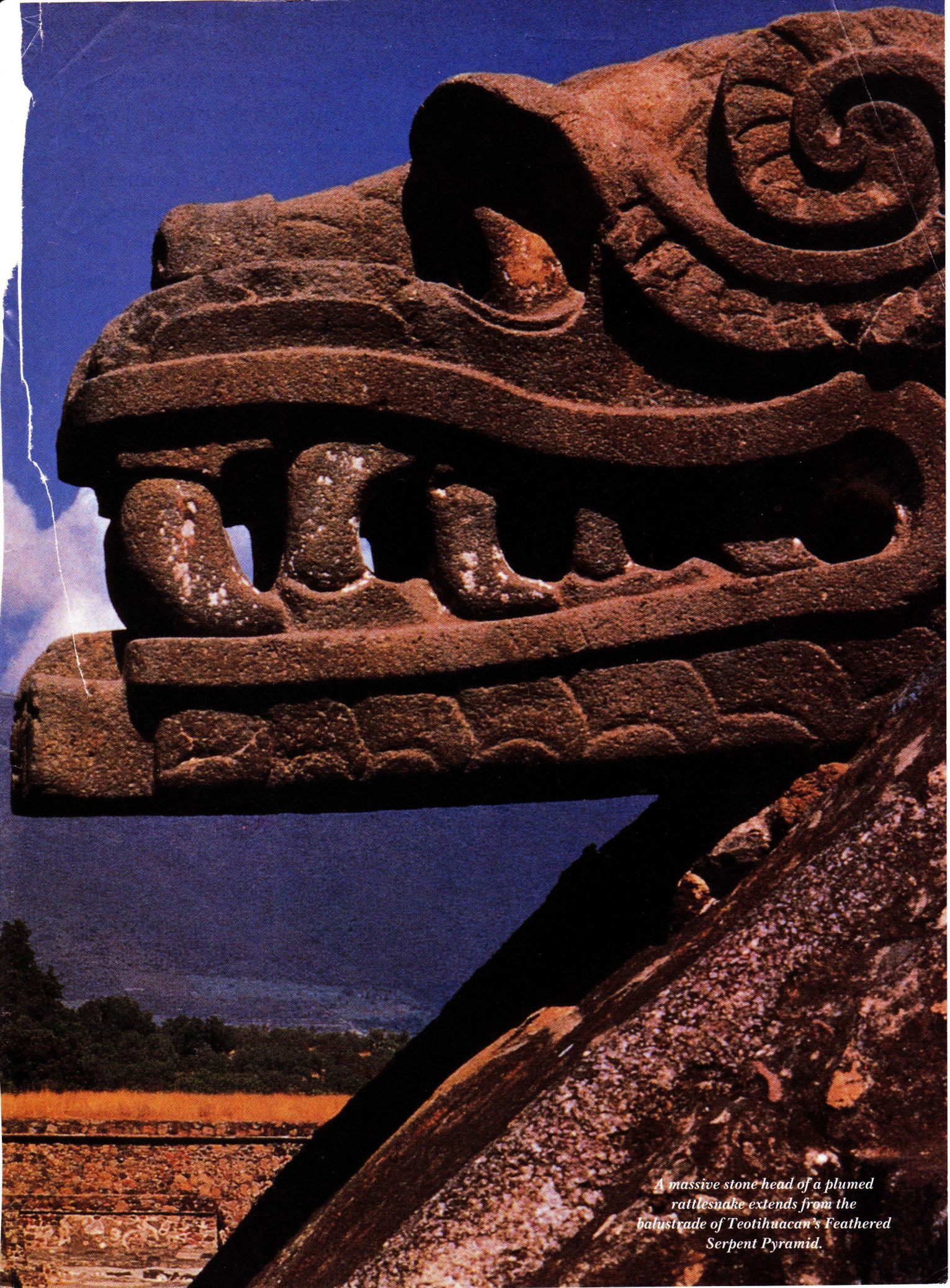
This issue's cover photograph, by José M. Iturriaga, depicts a plumed rattlesnake face from the Pyramid of the Feathered Serpent at Teotihuacan.



Rise *and* Fall *of the* City *of the* Gods

A cult of Venus-inspired warfare
and blood sacrifice both
sustained and ultimately
destroyed the great
Mesoamerican metropolis of
Teotihuacan.

BY JOHN B. CARLSON



A massive stone head of a plumed rattlesnake extends from the balustrade of Teotihuacan's Feathered Serpent Pyramid.

TEOTIHUACAN (TAY-OH-TEE-WAH-KAHN)... TO MILLIONS OF VISITORS EACH year, it is known simply as "The Pyramids," a vast ruined city whose brooding grandeur fills most of a tributary valley 30 miles northeast of Mexico City. I first visited the site in the summer of 1973, when I was a young graduate student in astronomy. Stepping out of an air-conditioned bus into the dry heat and bright blue sky, I was quite unprepared for the magnitude of the ruins. Its Street of the Dead, broad and straight, sloped northward across the valley for almost three miles, flanked by scores of temples and temple complexes including the Pyramid of the Sun, whose base is comparable to that of the Great Pyramid at Giza. At the northern end of the street stood the Pyramid of the Moon, whose architecture mimics the sacred

mountain of Cerro Gordo in the distance. Exploring its southern end, I discovered the monumental Ciudadela Complex, which surrounds a great rectangular courtyard large enough to have held 100,000 people. On the east side of the complex were the remains of palace and administrative buildings flanking the city's third largest monument, the Feathered Serpent Pyramid. Dozens of stone fanged monster heads, arranged in pairs, gazed out from its layered tableros and balustrades. One with a protruding jaw and plumed collar was surely the legendary Feathered Serpent so often depicted in Mesoamerican art. The other, sporting goggle-like rings on its mosaic-beaded forehead above inlaid obsidian eyes, was far more enigmatic.

As I searched for the best camera angles, my head spinning from the heat, altitude, and excitement, I was approached by one of the ubiquitous local guides. Teotihuacán was an ancient city of the Aztecs who, he proudly explained, were his ancestors. It was named Teotihuacan (Place of the Gods) because their gods, whom they worshiped with human and animal sacrifices, had been born here. The Aztecs, he told me, called the feathered serpent Quetzalcoatl, a powerful creator god of the winds, legendary warrior, and hero of the Aztec's spiritual ancestors, the Toltecs. The goggle-eyed monster was Tlaloc, a god of rain and fertility. Children were sometimes sacrificed to Tlaloc, their tears invoking the spirits of the rains.

Local guides at archaeological sites worldwide are notorious for supplying a creative mixture of fact and fiction, and this fellow was no exception. Teotihuacan was neither Aztec nor Toltec. In fact, it lay in ruins for nearly six centuries before the nomadic Mexica tribes, whom we now call the Aztecs, wandered into the Basin of Mexico and were awestruck, according to their own accounts, by its splendor. For them, Teotihuacan was the birthplace of the gods. In truth, they probably knew little more of the site's history than my guide.

Leaving Teotihuacan that day with more questions than answers, I vowed to learn as much as I could about

this ancient city and its relationship to the other cultures of Mesoamerica. This decision led to a change in my career from extragalactic astronomy to archaeology. I began to focus on the astronomical practices, celestial lore, mythologies, and world-views of the ancient peoples of the Americas.

Who were the Teotihuacanos? What language or languages did they speak? Why did the Valley of Teotihuacan become so important in the Classic period rather than the much larger and ecologically richer Valley of Mexico just to the south? What was the nature of their political, religious, and social systems? The tombs of the rulers have never been found and, unlike the Lowland Maya to the east, they left no obvious portraits of their leaders. Did they have a system of writing similar to the Maya? We know that the two cultures were in contact from Early Classic times. But, most important, what led to the rise of this extraordinary people around the beginning of the first millennium A.D., what was the key to their long-term success, and what precipitated the violent destruction of their city in the early eighth century?

We do know that Teotihuacan rose rapidly to become the largest urban center in the Americas. Its power and influence extended across Mesoamerica, east into the Maya and Gulf Coast areas, and southeast into Zapotec Oaxaca. The concurrent florescence of these cultures created what we call the Mesoamerican Classic period. Teotihuacan was a key player, and its fall precipitated a profound collapse of all of the Classic civilizations.

Our current understanding of Teotihuacan stems largely from the last 30 years of scientific excavation of the site. In 1960, Eric Wolf initiated the comprehensive Valley of Mexico Project, which addressed the natural history of this unique environmental zone as well as its complex cultural heritage. This work led to the remarkable Teotihuacan Mapping Project, headed by the University of Rochester's René Millon, which focused on the city itself, and the Teotihuacan Valley Project, directed by William T. Sanders of Pennsylvania State

University, which examined the rural environs of the valley. These efforts provided the scientific bedrock for a series of further archaeological excavations beginning in 1980 under the auspices of the Mexican National Institute of Anthropology and History (INAH) and headed by Rubén Cabrera Castro. During 1988–89, Cabrera and George Cowgill of Arizona State University directed further excavations in which Saburo Sugiyama, also of Arizona State, penetrated the heart of the Feathered Serpent Pyramid, which yielded explicit evidence for both militarism and abundant human sacrifice. My own research has focused on the Pan-mesoamerican practice of sacred warfare and ritual sacrifice regulated by the motions of Venus in the heavens. These efforts have yielded insights into Teotihuacan's spectacular rise to power, what sustained it and, moreover, what led to its violent demise.

Ancient Mesoamerican astronomers were well aware of Venus's 584-day celestial journey. Of the 16 or so surviving Precolumbian codices, five contain almanacs documenting Venus's position relative to Earth's 365-day solar year. According to two volumes, the Dresden and Grolier codices, Venus first appears just before sunrise in the east as Morning Star, where it can be seen for 236 days. Venus then disappears, reappearing 90 days later at dusk in the west as the Evening Star. Then, 250 days later, Venus disappears a second time only to appear once again as Morning Star eight days later, thus completing its cycle. New World astronomers noted that five 584-day Venus cycles equal eight 365-day years and they used this astronomical resonance as the basis of their almanacs, which span 2,920 days. The Dresden and Grolier codices contain 104-year almanacs, which tie the cycles of the Sun and Venus into the 260-day Mesoamerican sacred calendar.

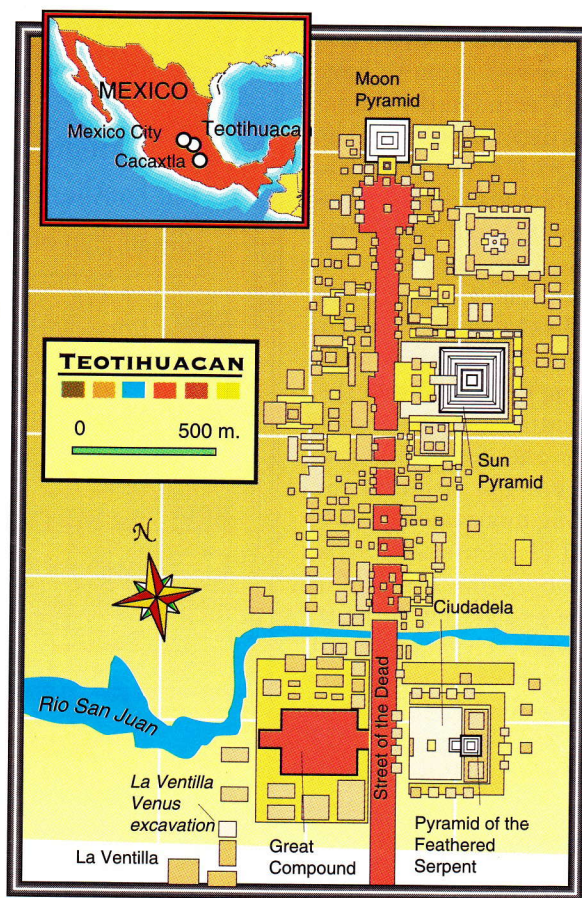
Why did the Mesoamericans create such elaborate Venus almanacs? The reason became clearer in the early 1980s when Floyd Lounsbury of Yale University discovered that certain war events or battles in Classic Maya texts, whose glyphs contained the Maya symbol for Venus, were timed to coincide with certain positions of the planet in the heavens. Dubbed "Star Wars" after the popular movie's title, these astrologically timed battles were soon recognized as practices that extended well beyond the Maya realm. We have identified glyphs associated with at least three Venus-cult traditions practiced

in Mesoamerica. One tradition was shared by the Maya and Gulf Coast peoples, one by the Zapotecs of Oaxaca, and another by the Teotihuacanos and cultures of the Mexican Highlands. In addition to military conquest, the Venus cult was concerned with the symbolic transformation of blood into water and fertility through the ritual execution of captives. Teotihuacan's Feathered Serpent was a representation of Venus, a god of warfare and blood sacrifice, as well as of water and fertility. The goggle-eyed Storm God has also been linked with both warfare and water. The key to our understanding of this cult has come only recently with the discovery of spectacular murals at Cacaxtla, a seventh-century site 80 miles east of Teotihuacan.

But let's start at the beginning. Sometime early in the second century B.C., a remarkable transformation began to take place within the small farming communities along the Río San Juan and the spring-fed marshes of the Teotihuacan Valley. At an elevation of more than 7,000 feet and with an annual rainfall of no more than 20 inches, the Teotihuacan Valley would appear to have been a marginal agricultural zone. However, numerous springs watered the valley's rich volcanic soil, making it a particularly fertile region. In addition, its proximity to valuable deposits of obsidian and its location on a major trade route to the Gulf Coast and Maya Lowlands gave the site strategic importance. At the beginning of the first century B.C. the region was dominated by

Cuicuilco, a town of about 10,000 inhabitants in the southern Valley of Mexico. Fortunately for Teotihuacan, natural disaster soon shifted the balance of power in its favor when the volcano Xitle erupted around 100 B.C., destroying Cuicuilco and its surrounding agricultural land. Following the eruption 90 percent of the valley's population moved northward to Teotihuacan.

The eruption of the volcano, however, seems not to have been the sole cause for the migration. Millon and a number of other scholars, including myself, believe that religion played a major role in attracting people to the site. In the 1960s Mexican archaeologists discovered that the Pyramid of the Sun, the last phase of which was completed sometime before A.D. 200, had been built atop an important shrine—a dry four-chambered lava-tube cave. Archaeologist Doris Heyden of Mexico's INAH has argued convincingly that this cave had long



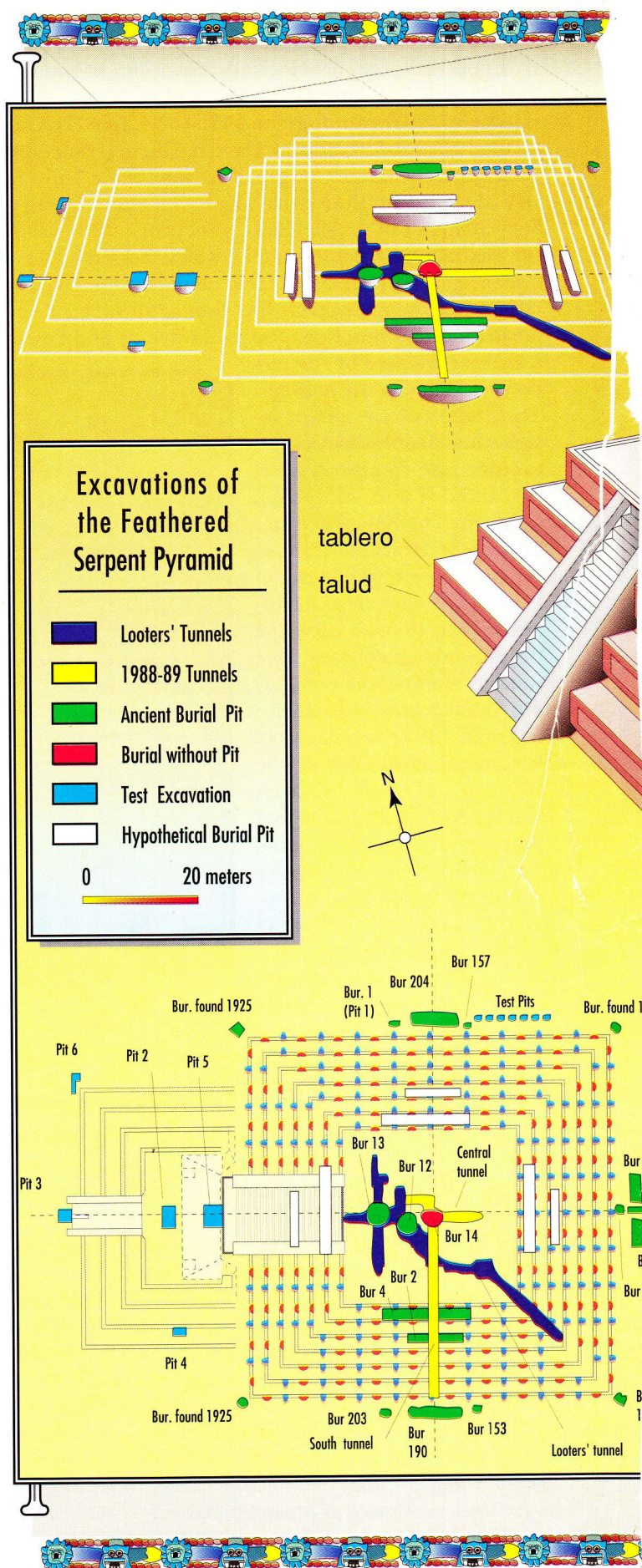
been an important sacred site, a place from which the Teotihuacan ancestors had emerged—its four chambers were likely interpreted as representations of the four parts of the Mesoamerican cosmos. In time, it became a Mesoamerican mecca attracting an increasing number of pilgrims as Teotihuacan prospered.

A second critical ideological factor in the city's development involved the rise of a primary deity who, in all of her forms, is known to us only as the "Great Goddess." First recognized as a female entity in the 1970s by Peter Furst, then at the State University of New York at Albany, and Esther Pasztory of Columbia University, the goddess is apparent throughout the site, in monumental stone sculptures and murals and highly abstracted iconography. Exhibiting both creative and destructive aspects, the goddess would seem to have been the physical embodiment of Cerro Gordo, the sacred mountain from which the springs that nourish the valley flow. She is often depicted with a bird of prey in her headdress, a well-known Teotihuacan warrior emblem. Streams of liquid flow from her mouth and cave-like womb. With a characteristic open-hand gesture, she scatters precious liquids, seeds, and flowers. Her priests bear bags of incense and likewise participate in the scattering rites—their chanting illustrated by flower-decorated scrolls emanating from their mouths.

By the middle of the second century A.D., the ground plan of the city had been worked out, apparently taking into consideration the location and layout of the underground cave, the surrounding mountains, including Cerro Gordo, and important elements of the cosmos. Several structures, most notably the Pyramid of the Sun and the Pyramid of the Feathered Serpent, face the northwestern horizon where the star cluster Pleiades sets and approximately where the sun sets twice a year when it passes directly overhead.

During the second half of the second century A.D. a brilliant new phase of municipal architecture south of the Pyramid of the Sun, including the Great Compound and the Ciudadela Complex with its spacious plaza, Feathered Serpent Pyramid, and flanking residential-administrative compounds, was completed. The Great Compound is likely to have served as a central market area for the city while the Ciudadela became its new administrative center. Even the Río San Juan, which cut through the site, was rerouted to conform to the city's design. Throughout its early years Teotihuacan was probably ruled by a succession of charismatic leaders. Millon, Cowgill, and others have argued convincingly that the Great Compound and Ciudadela were the work of the last such ruler, and have suggested that the Feathered Serpent Pyramid may have served, in part, as his mortuary monument.

After this extraordinary period of construction, there were no further monumental building projects, and attention was paid almost exclusively to renovating the city's residential areas. From A.D. 200 to 600, the city continued to flourish with long-distance trade becoming an important factor in its prosperity. Teotihuacanos



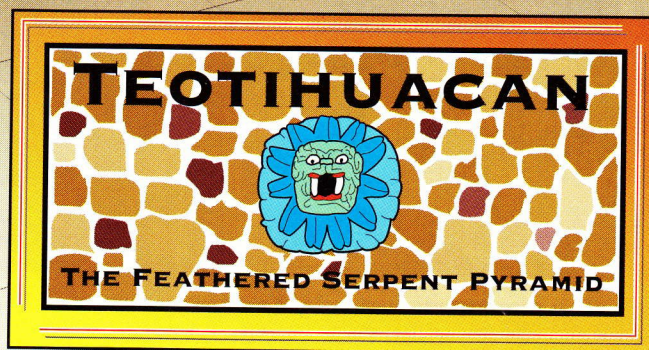
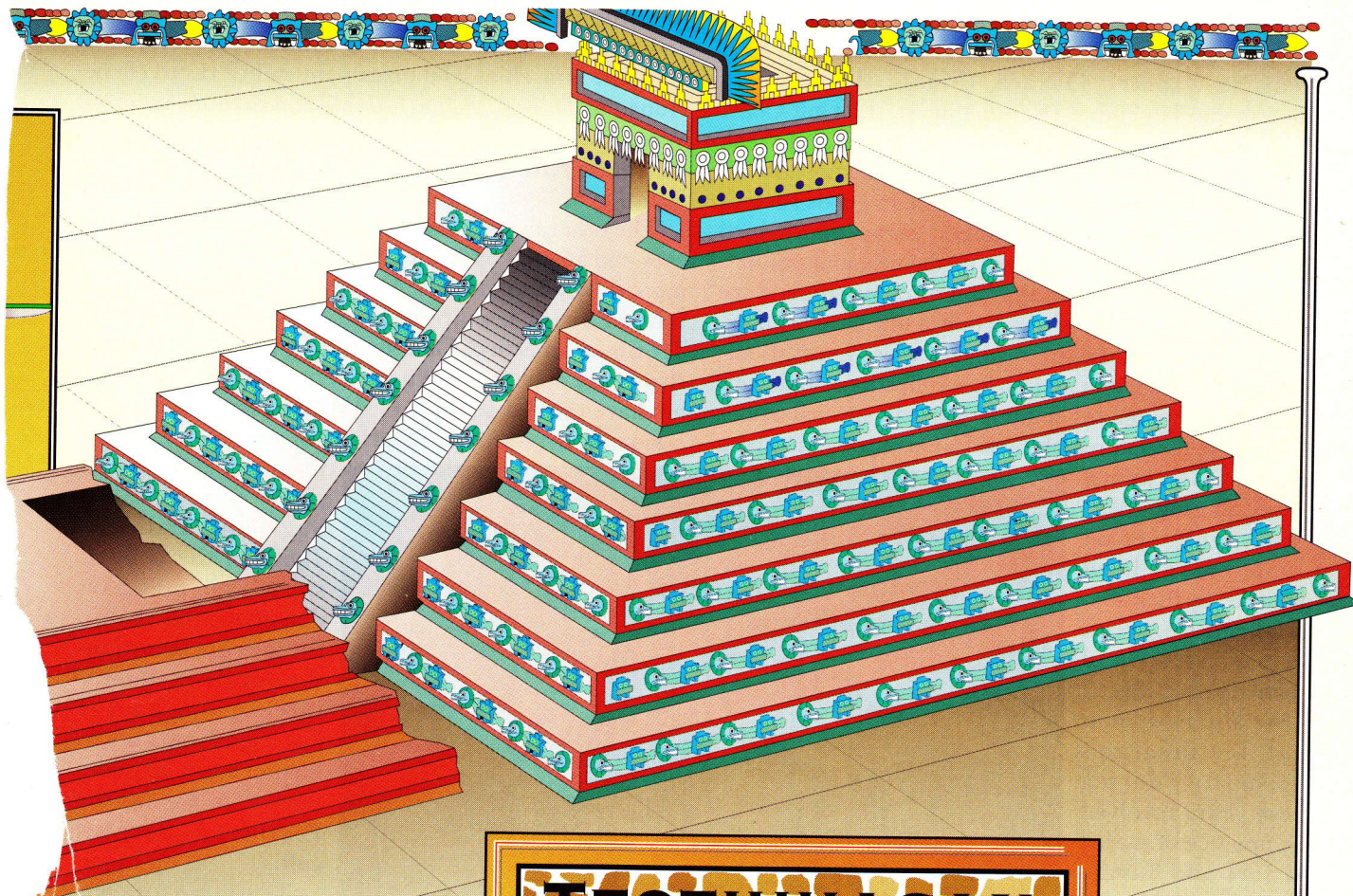


ILLUSTRATION BY JOE LEMONNIER, PHOTOGRAPH BY ENRIQUE FRANCO TORRES

extended their influence to the far reaches of Mesoamerica, with contacts, and even enclaves or colonies, in such areas as Zapotec Oaxaca (Monte Albán), the Guatemalan Highlands (Kaminaljuyú), the Gulf Coast (Matacapán), and the Maya Lowlands (Becan and Tikal, for example). These incursions were unquestionably associated with Highland-Lowland trade in goods such as obsidian, jade, shells, salt, rubber, cacao, exotic bird feathers, animal skins, incense, medicines, and textiles. More than 2,000 walled apartment compounds were built during this time, of which only a few have been excavated. Nonetheless, the results of these excavations, combined with surveys and surface collections, indicate a diverse society engaged in numerous craft specializations and diverse foreign populations. A Oaxaca barrio and a so-called Merchants' barrio, housing a Veracruz gulf coast group, have been identified by their material culture, architectural style, and mortuary practices.

We also now know that Teotihuacan's prosperity during these years involved the practice of sacred warfare and human sacrifice timed by the position of Venus. Ample evidence for this practice has been found at the Feathered Serpent Pyramid. The pyramid took its name from its remarkable façade of serpentine "Quetzal-

coatl" and goggle-eyed "Tlaloc" masks revealed in the 1918–22 excavations of the Mexican archaeologists Manuel Gamio and Ignacio Marquina. In the intervening decades many speculative theories have been offered concerning the identity of these figures, the meaning of the building's iconography, and the ultimate function of the temple and its surrounding Ciudadela Complex.

From the start, there has been essential agreement that the fanged figures with collars of blue-green feathers jutting out from the tableros and stairway balustrades are representations of the Feathered Serpent of Mesoamerican mythology. Images of this rattle-tailed serpent undulate along the pyramid and swim within bands of marine shells, including white conch and various pink-painted bivalves—all symbols of water and fertility. Debate, however, has arisen over whether these serpentine creatures represent the same deity that the Aztecs knew as Quetzalcoatl more than six centuries after the fall of Teotihuacan. Quetzalcoatl was many

things to the Aztecs, including a god of wind and legendary hero of the Toltecs. Quetzalcoatl could also manifest himself as Tlahuizcalpantecuhtli (Lord of the House of Dawn), a death-dealing warrior aspect of Venus whose rays speared victims. I have shown that the Feathered Serpent of Teotihuacan was also a manifestation of Venus, a god of warfare and blood sacrifice.

The other fanged monster head, with inlaid obsidian eyes and goggles on its mosaic forehead, has proved far more difficult to identify. Although the goggles and the fanged upper jaw are indeed characteristic of the Teotihuacan Storm God as well as the Aztec Tlaloc, this figure appears to be a different creature, one scholars have termed a Storm God-related serpent. It is occasionally depicted in full form with a rattle tail, forked

tongue, and often covered with scales. Sugiyama and Karl Taube of the University of California have demonstrated that in these representations the goggle-eyed creature, lacking a lower jaw, represents a war helmet worn by members of the militaristic Feathered Serpent cult.

Teotihuacan's Great Goddess appears to have played a major role in this militaristic cult. In Teotihuacan art, her attendant priest are virtually indistinguishable from the goggle-eyed warriors

responsible for providing captives for sacrifice. Cult priests are shown marching in processions with blood-dripping hearts impaled on great obsidian skewers. They also scatter the blood and related offerings as does their patroness, the Great Goddess, as she presides over a religion that justified war and conquest as a source of water and fertility.

The sixteenth-century Spanish chronicler, Bernardino de Sahagún, vividly described such Venus-related sacrificial practices among the Aztecs of his day: "Of the morning star, the great star, it was said that when...it newly emerged, much fear came over them; all were frightened. Everywhere the outlets and openings [of houses] were closed up. It was said that perchance [the light] might bring a cause of sickness, something evil, when it came to emerge. But sometimes it was regarded as benevolent. And also [captives] were slain when it emerged, [that] it might be nourished. They sprinkled blood toward it. With the blood of captives they spattered toward it, flipping the



This reconstruction of one of Teotihuacan's many murals depicts the Great Goddess, the city's primary deity.

JOHN B. CARLSON

middle finger from the thumb; they cast [the blood] as in offering; they raised it in dedication.” [Sahagún (1953: Book 7, Ch.3, 11–12), The Florentine Codex].

The Feathered Serpent Pyramid was painted almost entirely in hematite red, a dark blood-red color, with decorative bands of the blue-green circles representing the goggles worn by the Storm God. The structure represented nothing less than the Great Goddess herself, the Mother of Waters, made manifest in an architectural mountain. The Aztec word for city, actually the concept of city and community inextricably bound, was *Altepetl*, meaning “water-mountain.” The Feathered Serpent Pyramid was the ultimate statement of Teotihuacan as the *Altepetl*. The gruesome physical evidence of the Venus-regulated warfare cult, however, lay beneath the pyramid’s structure.

In 1925, the Mexican archaeologist Pedro Dosal found burials of single individuals, evidently sacrifices, placed in pits just outside each of the pyramid’s four corners. Then, during INAH-sponsored excavations conducted in 1983–84, Sugiyama and Cabrera uncovered three symmetrically placed burial pits along the southern side of the pyramid while excavating exploratory trenches. The largest, Burial 190, was a 25-foot trench placed midway along the side. It was flanked by two smaller interments (Burials 153 and 203). Burial 190 contained 18 young males, 169 obsidian projectile points, and more than 4,000 pieces of worked shell. Many of the skeletons wore collars made of imitation human maxillae (upper jaws) with artificial teeth carved from shell, as well as several real maxillae and mandibles. Behind the pelvic regions of several were small slate disks resembling *tezcacuitlapilli*, pyrite-inlaid mirrors often worn by Aztec warriors and regularly depicted as part of Toltec and other Highland Mexican military costumes. Most of these 18 individuals were found with their hands crossed at the wrists behind their backs, implying that they had been bound when placed in the tomb. The conclusion of the investigators was that these were sacrificed military personnel who, judging from the positions where they fell when buried, had been placed seated, facing away from the center of the pyramid as if to guard it and whatever it contained. The two interments flanking Burial 190 each contained one individual—a female in Burial 153 and a male in Burial

203. These interments have been likewise interpreted as sacrificial. Stratigraphic evidence has verified that all of these burials were associated with the construction of the pyramid.

The symmetry of the graves strongly suggested that similar multiple burials might exist along the north side and perhaps even on the east and west sides of the structure. This hypothesis was verified when another linear trench (Burial 204) with 18 sacrificed people with similar costume elements and offerings was found in 1986 on the north side. This trench was also flanked by two single interments completing the dedicatory pattern. Further excavations conducted by

Cabrera, Sugiyama, and Cowgill in 1988–89 revealed still more burials along the east side of the pyramid. Again, multiple and single burials included large numbers of obsidian projectile points, numerous worked shell ornaments, and cut shell imitation maxillae that formed elaborate collars. Slate disks were again found beneath most pelvic bones. In Burial 5, one person with pronounced cranial deformation was found interred with a massive collar composed of nine real human maxillae. Interestingly, in Burial 6, opposite Burial 5, another individual was found with a collar of shell teeth made to resemble those of wolves, coyotes, or dogs.

During the 1988–89 field season, Sugiyama began tunneling directly into the south face of the pyramid in part to search for a central tomb. About a third of the way to the center, he found two additional mass burials. The first was a simple one containing eight young individuals ranging in age from

ten to 25 years. They were found in the flexed position; some clearly had had their hands tied behind their backs and had been buried facing the center of the pyramid. These people may have represented the number of solar years in the Venus almanac. The second interment held 18 men with substantially richer offerings, 18 slate disks, numerous projectile points, and additional necklaces of either artificial or real human and canine jawbones.

Near the heart of the pyramid, excavators broke into an ancient looters’ tunnel. The looters had entered at the southeastern corner, moving diagonally. Modern measurements show that they missed the center by six feet, but that they had located and looted two mass burials to the west side of the center. Both of



In a Cacaxtla mural, the humiliated Bird Warrior Captain stands with arms folded in submission on a white ground decorated with Venus glyphs. The backdrop may represent a chamber where victims were prepared for sacrifice.



A scorpion man and woman, surrounded by glyphs representing Venus, decorate two rectangular columns in Cacaxtla's sacrificial chamber. The male wears a mask signifying membership in the militaristic Feathered Serpent Cult.

these (Burials 12 and 13) were badly disturbed, but the quantities of remaining grave goods suggest that these tombs contained the remains of some of the highest-status individuals yet found. Burial 13 still had one partially undisturbed and one complete skeleton found with a fine pair of earpools, 21 large beads, and a rectangular nose ornament, all of greenstone, as well as a large unusually shaped obsidian projectile point. The

discovery of a carved wooden baton in the form of a stylized serpent head suggested that at least some of the high-status individuals interred there may have held priestly office.

Working east, from the old looters' tunnel, Sugiyama finally reached the center of the pyramid where he found a mass grave with 20 undisturbed skeletons. These remains, known collectively as Burial 14, were

placed directly on the ground in an elliptical pattern along with the richest offerings found to date. All appear to have been adult males laid out in a complex scheme indicating some attention to orientation. Six skeletons were aligned along the pyramid's east-west axis, while the others tended to face the easternmost individual in the burial. However, this skeleton was indistinguishable from the others, and the rich collection of offerings was seemingly distributed randomly over the whole interment. The offerings, not yet analyzed in detail, included more than 400 greenstone items—among them 18 unique conical objects, figurines, earspools, nose ornaments, beads, and headdress-shaped plaques known as *resplandores*. More than 800 fine obsidian objects, 3,400 shell pieces, slate disks, animal and plant remains, and items of wood and fiber were found. In addition, archaeologists recovered nine groups of artifacts surrounded by vegetable material—possibly textile fragments. These were most likely specially prepared bundle offerings. There were only a few ceramic finds, including the remains of two vessels modeled in the shape of the Storm God. These offerings appear to have been deposited as part of the sacrificial rite rather than as the personal property of those buried under the pyramid.

It is clear that both the number of individuals within each burial as well as their placement are directly related to the pyramid's function within the religious life at Teotihuacan. Numbers such as eight, 18, and 20 immediately suggest calendrical significance. The months of the Mesoamerican calendar are 20 days in length. There are 18 full 20-day months in the traditional Mesoamerican 365-day year. Most significant, there are eight years in the Venus almanac. Although the four-directional pattern of the burials is not yet fully understood, it may, like the shape of the underground cave, reflect fundamental concepts of space and time.

Although the remains of more than 100 individuals have been found, the symmetrical placement of the burials suggests that as many as 200 people may have been sacrificed prior to the building's construction. But who were they? Cowgill favors the idea that they were loyal Teotihuacanos, sacrificed to serve as eternal guardians of a great charismatic leader buried in the

structure. There is ample precedent for this practice in Mesoamerica and elsewhere in the world. However, I believe that the remains may be those of enemy warriors and other prisoners captured in battle for sacrifice as part of the Venus warfare cult. The presence of the Storm God vessels in the central burial, a well-known ceramic form associated with water and fertility rites, fits my hypothesis.

Cowgill's theory and my own, however, are not mutually exclusive. The pyramid, believed to have derived sustenance from sacred sacrifices, may also have been the tomb of a powerful ruler. Those sacrificed there may include palace guards or royal retainers as well as prisoners

of war. Certainly the discovery of an undisturbed royal burial would have helped to support the pyramid-tomb hypothesis. Because of the ancient grave-robbers, we may never know if such an individual was ever interred in the structure. Future archaeometric analysis including DNA scanning may provide a key to the identities of the sacrificial victims. Excavations into the core of the Pyramid of the Moon, thought to be undisturbed, may answer the question of whether *any* of Teotihuacan's great pyramids was constructed as a ruler's tomb.

For half a millennium, Teotihuacan prospered. By the mid-seventh century, however, the city appears to have fallen into decline. Although no one dominant cause stands out, factors deriving from its long-term success seem to have spawned the seeds of its dissolution. The general health of the Teotihuacan people was poor

and infant mortality high. There are also indications that environmental degradation was taking its toll. Centuries of harvesting wood had drastically depleted the forests, permanent springs were less bountiful, clean drinking water was difficult to obtain, and disease was endemic. But what caused the city's violent end?

It is an ironic turn of fate that Teotihuacan, which was baptized in a rain of volcanic fire, was consumed in a great man-made conflagration. The archaeological evidence shows unequivocally that sometime before A.D. 750 the ceremonial and administrative heart of the city, all along the Street of the Dead, was systematically and selectively sacked and destroyed by fire. Outlying temple structures were likewise put to the torch,



A Cacaxtla warrior, dressed as a well-known Maya trader god, bears a merchant pack laden with Lowland Maya products such as quetzal feathers, cacao beans, rubber, and copal incense.



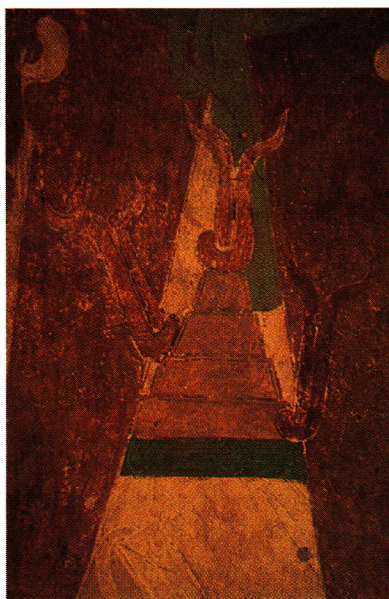
Portraits of emaciated captives are painted on the steps of Cacaxtla's Templo Rojo. Between the legs of one is an image of a burning five-stepped pyramid, detail below, symbolizing one of the places conquered by Cacaxtla.

though the majority of residential complexes were left untouched. But who did it and why?

Clues to Teotihuacan's demise may lie on a hilltop, about 80 miles to the east at the ruins of Cacaxtla, a fortified acropolis in the state of Tlaxcala, apparently established around A.D. 650–700 by elite Gulf Coast warrior-merchants known as the Olmeca-Xicalanca. The site had received little attention until the mid-1970s when some of the most spectacular murals ever seen in Mesoamerica were unearthed there. These included life-sized jaguar and bird-costumed warriors standing posed on the backs of jaguar serpents and plumed serpents, respectively, framed in water bands with numerous aquatic creatures. Further excavations revealed a great tableau of what appeared to be a fearsome battle between dark-painted jaguar-skin costumed Cacaxtla warriors and soldiers in elaborate bird costumes. The murals, which are marvelously preserved, were painted in a Lowland Maya style yet with an eclectic mix of iconography from Oaxaca, the Gulf Coast, the Maya region, and Teotihuacan.

Although the scene has been interpreted as a battle, the losers—the bird-costumed soldiers—have no

weapons. Furthermore, some of them are dressed as sacrificial victims, painted blue with their hands bound with characteristic sacrificial white paper or cloth ties, a Panmesoamerican symbol of sacrifice. I believe that this



is *not* a battle scene but a mass public sacrifice directly linked to the Venus cult practiced at Teotihuacan. On the west wall, the vanquished Bird Warrior Captain stands, hands folded in submission, guarded by a victorious Cacaxtla warlord named Three Deer. The Bird Captain stands in front of a strange white backdrop framed in red Teotihuacan Venus glyphs.

The meaning of this backdrop became clearer after the recent discovery of two new and equally spectacular groups of murals at Cacaxtla. The first was painted on two rectangular columns of a cloistered chamber on the west side of the site. They depict a blue-painted scorpion man and woman. The couple, members of the militaristic Venus cult, stand with upraised arms in a dancing posture above blue water bands on a red background, framed in Teotihuacan Venus glyphs. Each figure wears a jaguar-skin kilt with a massive Oaxaca-style Venus glyph buckle. The upper torso and head of the female did not survive the centuries; the

scorpion-tailed man clearly wears a goggle-eyed mask of the Teotihuacan Venus war cult.

When I saw this painted chamber, I realized in one of those moments that all archaeologists live for, that this was the very sacrificial chamber where the humiliated Bird Warrior Captain had been prepared for sacrifice. The Venus glyph backdrop behind the defeated Bird Captain in the "battle" scene was a representation of this very room. Moreover, a representation of this same chamber is included in a previously undeciphered glyph at Cacaxtla—the glyph shows a rectangular box decorated with Teotihuacan Venus glyphs terminating in the well-known scattering hands of the Great Goddess and her attendants. The Bird Warrior's blood must have been offered in rites evoking the forces of fertility under the auspices of Venus. Nowhere is this concept more graphically represented than in a portrait of one of the Cacaxtla jaguar warriors. He holds a great bundle of darts bound up in blue cloth tied with the same strips of fabric worn by sacrificial victims. From the darts' obsidian tips, large droplets of blood fall down, filling the water bands that frame the scene. These blood drops are bright blue, having been transformed into the nourishing waters of life.

The last group of murals was found in a sunken chamber called the Templo Rojo. Amid myriad symbols of natural bounty such as mature maize plants and cacao trees, a Cacaxtla merchant warrior named Four Dog is dressed in the costume of a well-known Maya trader deity. His merchant pack, laden with Lowland products such as quetzal feathers, rubber for the ball game, jaguar skins, and possibly cacao, is propped up on his lance. Below him, laid out on the floor for all to walk on, is a remarkable tableau of emaciated captives with sacrificial ties bound around their heads. Between the legs of one of these victims is a burning five-stepped temple-pyramid consumed by flames, a ubiquitous symbol for conquest in the Aztec world. The Templo Rojo murals show us for the first time that this symbol was in use at least 600 years earlier when Teotihuacan was destroyed by fire. Furthermore, on the step riser directly below these captives are the name glyphs of at least seven places Cacaxtla conquered. Two of these places are illustrated with Teotihuacan-style temples. I propose that these place names may be temples or enclaves in or around Teotihuacan. The warrior merchants of Cacaxtla had migrated up along one of their well-traveled routes and

established themselves in Tlaxcala as the power of the old city waned. Some of them may have also been part of the foreign population represented in enclaves such as the Merchants' barrio at Teotihuacan. In time, they, aided by other like communities, simply overran and destroyed the city.

These are immensely exciting times in Teotihuacan research. Current excavations by Cabrera and others are producing wonderful surprises. Just this past August, I visited Cabrera's new dig in the La Ventilla area, just southwest of the Ciudadela. Surrounded by an army of archaeologists, conservators, and field workers, we walked from one ancient building to the next, passing by city streets that had not been trodden in 1,500 years. I



A red band with Venus glyphs was painted on the lower walls of a newly excavated room in the La Ventilla area of Teotihuacan. Those buried under the Feathered Serpent Pyramid may have been prepared for sacrifice in just such a chamber.

was startled by what I saw in one small room where young workers were carefully removing the dry fill from the face of a red-painted band of murals along the lower walls. To my astonishment, I realized it was a sacrificial chamber just like the one at Cacaxtla. I had been scouring the literature for images of just such a room at Teotihuacan. Here, the red basal band was decorated with Teotihuacan Venus glyphs with red droplets falling in between, and at the corners were goggles of the Storm God Venus warriors. Other rooms in the compound bore murals of the plumed jaguars or pumas of the elite Teotihuacan military orders. Was this the kind of place in which those buried beneath the Feathered Serpent Pyramid had been prepared for sacrifice? I will always remember that special day as the twentieth anniversary of my first visit to the mysterious City of the Gods. I could never have imagined that, in 20 years time, stars on walls would be as fascinating as those in the heavens. ■

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THE HUNT FOR PRIAM'S TREASURE, page 26. For the disclosure that Priam's Treasure is in Moscow, see *ARTnews*, April 1991 and April 1992. On the joint German-Russian commission for the repatriation of art works, see *The Art Newspaper*, April 1993 and September 1993. Schliemann's gift of the treasure to the German people and the claim of the Museum für Vor- und Frühgeschichte to its ownership are documented in Geraldine Saherwala, Klaus Goldman, and Gustav Mahr, *Heinrich Schliemann's "Sammlung trojanischer Altertümer"* (Berlin: Wissenschaftsverlag Volker Spiess, 1993). Klaus Goldmann and Günter Wermusch, *Vernicht, Verschollen, Vermarktet* (Asendorf: MUT-Verlag, 1992) deals with wartime looting in general. On the questions surrounding the discovery of Priam's Treasure, see David A. Traill, "Priam's Treasure: Schliemann's Plan to Make Duplicates for Illicit Purposes," pp. 110–21 in William M. Calder, III, and David A. Traill, eds., *Myth, Scandal, and History* (Detroit: Wayne State University Press, 1986). Traill's bibliography includes a series of articles (chiefly in the journal *Antiquity*) in which he and Donald F. Easton debated the veracity of Schliemann's account of the treasure. For the removal of the treasure to Athens, see David A. Traill, "How Schliemann Smuggled 'Priam's Treasure' from the Troad to Athens," *Hesperia* 57:3 (1988), pp. 273–77. Traill's various articles are now being compiled as *Excavating Schliemann: Collected Articles 1979–93* (*Illinois Classical Studies, Supplement 4*).

ANATOMY OF A MASSACRE, page 42. Recommended are James Fenimore Cooper, *The Last of the Mohicans* (various editions, 1826 to present); Ian Steele, *Betrays: Fort William Henry & the "Massacre"* (New York: Oxford University Press, 1990); and John R. Cuneo, *Robert Rogers of the Rangers*, (Ticonderoga, NY: Fort Ticonderoga Museum, 1988).

RISE AND FALL OF THE CITY OF THE GODS, page 58. Janet Catherine Berlo, ed., *Art, Ideology, and the City of Teotihuacan* (Washington, DC: Dumbarton Oaks, 1992) contains 13 excellent papers from the October 1988 Dumbarton Oaks Pre-Columbian Studies Conference. Kathleen Berrin and Esther Pasztory, eds., *Teotihuacan: Art from the City of the Gods* (New York: Thames and Hudson and the Fine Arts Museums of San Francisco, 1993) contains many important essays along with the full catalog of the landmark exhibition of the same name at the M.H. de Young Memorial Museum in San Francisco (see *ARCHAEOLOGY*, May/June 1993, pp. 59–61). There is also an attractive, inexpensive, and bilingual, 48-page popular catalog titled *Teotihuacan: City of the Gods*, produced by the museum, that is worth the \$5.00 price. John B. Carlson, *Venus-regulated Warfare and Ritual Sacrifice in Mesoamerica: Teotihuacan and the Cacaxtla "Star Wars" Connection* (*Center for Archaeoastronomy Technical Publication No. 7*, 1991), provides the details of the author's research. (Available from The Center for Archaeoastronomy, P.O. Box X, College Park, MD 20741.) An abbreviated version will be published in Clive Ruggles and Nick Saunders, eds., *Astronomies and Cultures* (Niwtot: University Press of Colorado, in press). Also recommended are Kathleen Berrin, ed., *Feathered Serpents and Flowering Trees: Reconstructing the Murals of Teotihuacan* (San Francisco: The Fine Arts Museums of San Francisco, 1993) with essays by Clara Millon, René Millon, Esther Pasztory, and Thomas K. Seligman; George E. Stuart, "Mural Masterpieces of Ancient Cacaxtla," *National Geographic*, September 1992; John B. Carlson, "America's Ancient Skywatchers," *National Geographic*, March 1990; and Rubén Cabrera Castro, Saburo Sugiyama, and George L. Cowgill, "The Templo de Quetzalcoatl Project at Teotihuacan: A Preliminary Report," *Ancient Mesoamerica* 2 (1991), pp. 77–92.