End of Days
Real and Imagined Maya Worlds

Museum of Art and Archaeology
University of Missouri-Columbia

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MAYA CALENDARS

The Maya recorded numbers using a base-20 numbering system, so that units of twenty are emphasized (we use a base-10 system).

The Mayan Sacred Round, or Tzolkin, is a 260-day cycle. Each day is marked by a number (1-13) and one of twenty day names, beginning with Imix, then Ik, Akbal, and Kan, and ending with Ahau. The first day in the cycle is 1-Imix. The second is 2-Ik, the third 3-Akbal, and so on until 13-Ahau. Then, because there are only thirteen numbers used but twenty day names, the next day is 1-Ix, which is the fourteenth day name. It takes 260 days for the two cycles, the numbers 1-13 and the twenty day names, to match up again with 1-Imix.

The Haab, or Vague Year, is a 365 day cycle of eighteen months of twenty days each, plus a short month of five days. While the Haab and the Tzolkin are separate, combined it takes 52 years for the same designations (number, day name, and Haab day and month) to recur. This constitutes the Calendar Round, which was observed by a variety of Mesoamerican groups. It designated day and date within a given 52 year cycle, but did not include a way to record a specific year.

The classic Maya later developed a linear calendar, called the Long Count, using a 360 day year (the tun), broken up into 18 months (uinal) each 20 days (kin, or suns) long. Twenty years was a katun, and twenty katun was a baktun, or a unit of 144,000 days. Unlike the Calendar Round, the Long Count could uniquely record the year in which an event occurred.

Sound complicated? We use a similarly complex system, in which day names (Monday, Tuesday, etc.,) are repeated every seven days, and run independently of day numbers and month names (1 December, 2 December, etc.) and years (2011, 2012). And every four years the Gregorian calendar adds an extra day to one month. Various holidays are calculated using a separate lunar calendar, which is why a Christian holiday like Easter changes in date from year to year. It has been calculated that the various cycles used for calculating Easter only repeat every 5,700,000 years in the Gregorian calendar.
TO WHAT END WAS TIME RECKONED?

The Calendar Round and Long Count played very different roles.

The Calendar Round organized daily life and corresponded to astronomical events and cycles. Long Count dates were associated with divine kingship, and with recording military victories and coronations. The lunar cyclic calendars were developed before the Long Count and continued to be used for more than a millennium after the Long Count was abandoned—the last Long Count inscription is dated to 910 CE, while lunar calendar reckonings remain in use by some communities today.

The Long Count provided a means for Mayan lords at the peak of their powers to pinpoint their victories—military and dynastic—to a unique year, and in a format that did not assume power was fleeting and events cyclical. It allowed them to conquer time.

But did it predict the end of the world? Some Maya sources say that we live in the fourth world, with each of the previous worlds destroyed because of the vices of its inhabitants. The last such world lasted for 13 baktun, and was destroyed—and our world created—on 11 August 3114 BCE. December 21, 2012 is 13 baktun from that date.

Inscriptions referencing the end of the 13th baktun in the fourth world, however, describe the investiture of the God Bolon Yokte’ rather than a cataclysm, and many Long Count inscriptions reference dates far beyond this supposed end of the world. One inscription at Palenque, Mexico, references a date of 21 October 4772 CE, and murals at Xultún in Guatemala calculated astronomical dates some 7000 years into the future.

The Long Count doesn’t predict the end of the world in 2012. Instead, it chronicles the zenith of Maya political power and intellectual achievement during a period when Maya elites were truly Lords of Time. That world ended not with a supposed 2012 apocalypse but with the decline of the Maya city states after 1000 CE, and the destruction of native knowledge and records (including a wealth of pre-Columbian books recording Mayan texts) following European contact half a millennium later.
CASE 1

1. Plate with Glyph Design
Guatemala, Maya culture, Classic period, ca. 600 CE
Pottery (80.369)
Gift of Boss Partners

The format of the central design on this plate corresponds to a date or number glyph, with dots and bars recording the number and the glyph identifying the month or day name, but in this case the glyph does not appear to correspond to any recognizable Mayan glyph. It may be a pseudo-glyph, imitating a real glyph but created by someone unable to read the actual texts.

2. Tripod Plate with Kneeling Figure
Mexico, Maya culture, Late Classic period, ca. 600-900 CE
Pottery (98.10)
Gift of Mr. and Mrs. Cedric H. Marks

Stylistically this plate is similar to a series of Dancing Maize God plates, many associated with the major Maya site of Tikal. The angular, stylized figures of this style generally date to the Late Classic period. But the figure depicted here may not appear to be the Young Maize God, who is often depicted emerging from a turtle shell rather than the conch shell shown here.
3. Tripod Plate with Bird-Headed Figure
Yucatan, Mexico, Maya culture, Classic period, ca. 500-650 CE
Pottery (76.83)
Gift of Mr. and Mrs. Cedric H. Marks in memory of Julius Carlebach

Bird-headed figures appear in several contexts in Maya art, often in conversation with the god Itzamnaaj, the king of the gods. The bird-headed figures and birds are assumed to represent messengers. Bird-headed figures are often shown with long, sharp “hummingbird” beaks, and are associated in iconography with bloodletting and sacrifice. Here, however, the figure has the beak of a raptor.

Human figures with bird masks are also portrayed, often in association with depictions of warfare or drinking.

4. Tripod Plate with Rattle Feet
Mexico or Guatemala, Maya culture, Late Classic period, ca. 600-900 CE
Pottery (79.166)
Gift of Ames Partners

The figure on this rattle-footed tripod polychrome plate sits at the edge of a dais with a plumed implement in his hand. He may be preparing for a bloodletting ceremony. Individuals used plumed perforators to draw blood, often from their earlobes, penis, or tongue, as part of sacred rituals.

Blood and life were inextricably connected in Maya belief, as gods gave life to humans by their own sacrifice. By re-enacting this action political leaders legitimized their rule and emphasized that their sacrifice ensured the prosperity of their people.
5. Seated Man Impersonating a Deity
Mexico or Guatemala, Maya culture, Late Classic period, ca. 600-900 CE
Stucco (82.436)
Gift of Mr. and Mrs. Andrew Gyenes

Maya kings impersonated deities as part of sacred and political rituals; these impersonations are attested in both iconographic depictions and epigraphic narratives. By identifying themselves with deities, kings both legitimized their reign and equated their own rise to power with the proper functioning of the natural order.

This figure wears an elaborate mask formed of two animal heads stacked one atop the other; the deity being impersonated has not yet been reliably identified.

6. Bowl with Frog on the Interior
Guatemala, Maya culture, Classic period, ca. 500-700 CE
Pottery (80.357)
Gift of Boss Partners

The effigy inside this bowl—which would appear when the contents were tipped or emptied—probably depicts the Mexican Burrowing Toad (*Rhinophrynus dorsalis*). One naturalist described it as a “small rubbery sack of toad with black beady eyes.” It is closely associated in Maya legend with the human struggle to survive droughts and the dry season. Burrowing toads bury themselves deep in the ground during the dry season, then push themselves to the surface when their burrows fill with water following rain. After emerging, the male toads voice their mating calls, leading the Maya to call them the minstrels of Chac, the rain god.
7. Tripod Plate with Muan Bird
Mexico, Coastal Campeche, Maya culture, Late Classic period, ca. 600-900 CE
Pottery (76.82)
Gift of Mr. and Mrs. Cedric H. Marks, in memory of Julius Carlebach

The Muan Bird shown on this tripod plate is often associated with maize and death. Extremely similar plates from Campeche exhibit a similar headdress forming a glyph readable as “kimi,” a Mayan day name meaning “death.”

The Muan is also associated with a god known as the Principal Bird Deity. According to Maya myth the Principal Bird Deity holds and abuses kingly power; the Hero Twins defeat the Muan and wrest political power from him.

The Hero Twins then resurrect their father, who in rebirth becomes the Tonsured Maize God. By inserting themselves into this mythic cycle, Maya kings associated themselves with both legitimate kingship and the production of food.

8. Lidded Tripod Vase with Resist Painting
Guatemala or Peten, Mexico, Maya culture, Classic period, ca. 300-600 CE
Pottery (79.160)
Gift of Ames Partners

Using a resist or negative painting technique, Maya artists here depicted alternating panels of young ceiba trees with their distinctive spikes and frogs on a field of dots representing rain.

While the Long Count calendar was used to record dynastic struggles and unique historical events, the Calendar Round was used to calculate astronomical events and chart seasonal cycles crucial to agricultural success.

Current theories regarding the abandonment of classic Maya centers around 900 CE suggest that a combination of deforestation, mild drought, and soil degradation led to agricultural failure and economic collapse.
CASE 2

1. Tripod Vase with Relief Carving
Guatemala, Maya culture, Classic period, ca. 400-700 CE
Pottery (80.358)
Gift of Boss Partners

Carved or painted diagonal design panels are a common feature in Maya pottery. Here the panel includes a figure in profile and hatched designs representing water lily pads. In some cases carved designs like these are complimented by resist decorations moving in the opposite direction. In this case cinnabar has been rubbed into the decorative band to set off the design against the dark surface of the vessel.

2. Fluted Bowl with Carved Designs
Chama, Guatemala, Maya culture, Late Classic period, 600-900 CE
Pottery (73.245)
Gift of Mr. and Mrs. Stanley Westreich

This lovely carved bowl has panels depicting the so-called “Water-Lily Monster” or “Water-Lily Serpent” with the k’an-cross. The k’an cross marks the location of the Maize God’s rebirth, and the tree of life springs from the Water-Lily Monster.

The Water Lily Serpent is also associated with the number 13, and also substitutes for the tun, or year, in Maya calendrical inscriptions. Thirteen is a sacred number to the Maya, and the supposed end of days is the end of the 13th baktun (each baktun being roughly twenty katun cycles of 20 tun each) since the base date
3. Portrait Head
Campeche, Mexico, Maya Culture, Late Classic period, ca. 600-900 CE
Stucco (76.85)
Gift of Mr. and Mrs. Cedric H. Marks in memory of Julius Carlebach

Thirty years ago the ancient Maya were viewed as peaceful stargazers, led by scholar-priests inhabiting remote ceremonial centers in the rain forest. Extensive archaeological excavations, object-based research on Maya stele and ceramics, and the decipherment of Maya glyphs have radically changed our perceptions of Maya society. The Classic Maya world was filled with powerful princes and competing dynasties, political intrigue and military conquest. Maya lords maintained their power through blood sacrifice—including regular bloodletting by kings—and by linking their rule to the divine order. The Long Count let them record their individual accomplishments, while the Calendar Round let them equate their actions with those of the gods.

4. Cylindrical Vessel with Relief Decoration
Mexico (?), Maya culture, Classic period, ca. 300-900 CE
Pottery (98.11)
Gift of Mr. and Mrs. Cedric H. Marks

Rattle-footed vessels are common throughout pre-Columbian Mesoamerica. Here the rattle is an integral part of the vessel itself. A false bottom inside the pot creates a cavity within which loose clay pellets rattle, and the walls around the lower cavity are pierced with holes and slits to prevent the cavity from exploding due the expansion of heated gases during firing. Decoration on the exterior consists of a scene carved in relief: a dancing figure with a long-necked bird head extending from his head; a seated figure; and a dancing figure blowing into a conch shell trumpet. Each human figure is separated by a bird-headed human figure or a part of a figure; all the bird-headed human figures are inverted.
5. Vase with Glyphs  
Calakmul, Campeche, Mexico, Maya culture, Late Classic period, ca. 650-750 CE  
Pottery (84.179)  
Gift of Bernard Sperling

One of the most common currencies for Maya trade, taxation and tribute was the cacao (chocolate) bean. The use of this cylinder vase as a vessel for cacao is stated explicitly. The glyphs read "it is painted and full," followed by an unreadable glyph, then "his cup for fruity cacao," followed by the owner's (?) name, "Yopat B'alam." Yopat B’alam is the name of at least two rulers of the Maya polity at Yaxchilan; while far from Calakmul, wives of Yaxchilan rulers are known to have come from Calakmul. In fact, Yopat B’alam II rules Yaxchilan briefly before the son of a Calakmul wife retakes the throne in 752 CE.

The main body of the vessel bears a more complex design featuring the Mayan xoc fish, recognizable from its eye, brow curl, and fin-like barbules. The circular mid-section of the creature is sometimes associated with celestial bodies and stars.

6. Polychrome Bowl with Glyphs  
Guatemala, Maya culture, Early Classic period, ca. 300-600 CE  
Pottery (80.373)  
Gift of Boss Partners

Many Maya polychrome vases combine a pictorial narrative with a written narrative in glyphs. Other vessels, like this small bowl, feature only glyphs.

The glyphs on this vessel have not yet been deciphered.
7. **Bowl with Zoned Painting**
Guatemala (?), Maya culture, Late Classic period, ca. 600-900 CE
Pottery (74.199)
Gift of Mr. and Mrs. Justin Kerr

Justin Kerr, who donated this bowl to the Museum of Art and Archaeology, pioneered the “rollout photography” of Maya pottery. His images helped Maya epigraphers and iconographers better understand the composition and structure of Mayan ceramic designs.

Here a series of zoned decorations and extremely stylized glyphs or pseudo-glyphs decorate a small bowl. While the pseudo-glyph on this vessel does not correspond to any recognizable Maya glyph, it may be a simplified version of a glyph, or one created by someone not familiar with the canonical depictions.

8. **Incised Black-Ware Bowl**
Mexico, Maya or Olmec culture, period unknown
Pottery (2009.130)
Gift of William A. Scott

The motif on this burnished flat-bottomed bowl refers to both the water lily, frequently shown in Maya art as an oval pad with a scalloped border, cross-hatched with “beads” in the center of each resulting square, and to the rebirth of the Tonsured Maize God. Mayan scholars suggest that the Tonsured Maize God symbolically represented Mayan kings, who ensured prosperity and abundance through their sacrifices. He is also associated with base date of the Mayan Long count calendar, the starting date of August 11, 3114 BCE, from which all other Long Count dates are reckoned.
9. **Copador-Style Bowl with Band of Pseudo-Glyphs**
El Salvador, Maya culture, Late Classic period, ca. 600-900 CE
Pottery (2009.193)
Gift of William A. Scott

Bowls of the Copador style often depict “swimming” figures shown below a band of glyphs or pseudo-glyphs. Pseudo-glyphs resemble actual Maya logographic or syllabic glyphs but don’t conform to the canons of Mayan writing. Some Mayanists suggest that pseudo-glyphs appear during a period of social upheaval and rapid change when the production of ceramics for exchange may have surpassed the supply of both scribes able to properly depict glyphs and of educated consumers able to read them.

“Swimming” figures are recognized from their horizontal posture and the characteristic positions of the arms and legs; this specific style can be further recognized by a specific treatment of the “belt pack” and the way the mouth and lips are depicted.

10. **Polychrome Cylinder Vase**
Guatemala, Maya culture, Late Classic period, ca. 600-900CE
Pottery (74.198)
Gift of Mr. and Mrs. Justin Kerr

A Maya lord or scribe sits with one hand extended to capture drops falling from the unidentified object to the figure’s right. The graceful, stylized presentation of both the figure and the glyphs on this vessel are known from many Maya vases. This informal and fluid style is particularly evident in the way the figure’s hand is depicted.

Earlier generations of art historians concluded that the writing across the top of this vessel represented meaningless “pseudo-glyphs;” the glyphs are now being reassessed based on recent advances in Mayan epigraphy.
CASE 3

1. Polychrome Cylinder Vase with Seated Noble or Scribe
Guatemala, Maya culture, Late Classic period, ca. 600-900 CE
Pottery (80.197)
Gift of Mr. and Mrs. Robert Linton

A nobleman or scribe sits on a raised dais, reaching out to what may be a document. Like many Maya polychrome vases the depiction is carefully framed with broad vertical reddish bands that transform the continuous decoration characteristic of a cylinder—with no clear starting or ending point--into a single tableau with a defined center and edges.

The black design to the figure’s left is a common way of depicting flowers or plants.

2. Cylindrical Vase with Attendants Dressing a Maya Lord
Mexico, Maya culture, Late Classic period, ca. 600-900 CE
Pottery
Loan from the Milwaukee Public Museum

A Maya lord looks into a mirror to check his appearance while being dressed by his attendants. The splendor of Maya court ritual was not simply a matter of exhibiting wealth and power. It was also a replication of the divine order, with Maya kings presenting themselves as deities and explicitly linking their reigns with the perpetuation of the celestial order.

Maya writing also supported this process of legitimation, by expressing esoteric knowledge through a complex writing system which only a small subset of the population could read. Some Maya vessels exhibit pseudo-glyphs, which are superficially similar to actual glyphs but were apparently created by individuals who could not read actual glyphs.
3. **Cylindrical Tripod Vase with Maya Blue Stucco Decoration**  
Mexico or Guatemala, Maya culture, Late Classic period, ca. 750-900 CE  
Pottery with stucco  
Loan from the Milwaukee Public Museum

This polychrome tripod cylinder vase is decorated with Maya Blue, a distinctive pigment developed by the ancient Maya using crushed leaves of indigo plants mixed with a particular kind of fuller’s earth called attapulgite. The source of this particular clay was not rediscovered until the 1960s.

At some Maya sites like Chichen Itza in the Yucatan this pigment is also associated with human sacrifice. It was developed relatively late in the Classic period, and was widely used on ceramics, textiles, and in the famed Maya frescos at Bonampak.

**CASE 4**

**Incense Burner**  
Mexico or Guatemala, Maya culture, Late Classic period, ca. 600-900 CE  
Terracotta (82.434)  
Gift of Phillip Pearlstein

The spikes on this censer invoke the ceiba tree, sacred as the world tree and as the pillars holding up the sky in the *Books of Chilam Balam*, a Mayan account of the end of the last world often cited by believers in a coming Mayan apocalypse. Four great ceiba trees, each associated with a color and with a cardinal direction, stand as witnesses to that earlier destruction. But while ceiba trees are witnesses to the cataclysm, they are also guarantors that the destruction is a renewal rather than an apocalypse. Censers like this one carried *copal* incense and prayers to the gods, and the day after the “end” of that last world—and the beginning of our current one—is named for the ceiba tree.