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## **CAVES AND NEW FIRE CEREMONIES IN THE CENTRAL MEXICAN HIGHLANDS: THE CASE OF THE CERRO DE LA ESTRELLA, IZTAPALAPA, MEXICO**

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### **Abstract**

The calendrical ritual known as the New Fire ceremony was in many ways the paramount rite of cultures in the central Mexican Highlands. Here, we will examine this ritual and its connection to caves as manifested at the Cerro de la Estrella, where the last New Fire ceremony was celebrated by the Aztec in AD 1507. Based on continuities in rock art and archaeological evidence we suggest that New Fire ceremonies were already celebrated at the Cerro de la Estrella during the Epiclassic (c. AD 750-950) if not during the latter centuries of the Early Classic. We present results of investigations and contextualise our findings in relation to the ethnohistoric sources that pertain to the New Fire ceremony. We also suggest that the close connection between caves and fire-drilling rituals is established by mythological precedent recorded in the ethnohistoric manuscripts, wherein the emergence of humans from Chicomoztoc – the fabled ‘seven caves place’ – is closely followed by the drilling of the First Fire, an important aspect that heretofore has been overlooked and neglected by recent scholarship. For this reason, all subsequent New Fire rituals are in essence recreations of this foundational First Fire and materialisations of the distant past.

**Keywords:** Caves, New Fire Ceremony, Cerro de la Estrella, Sacred Geography, Epiclassic, Ethnohistoric Sources

### **Resumen**

El ritual calendárico conocido como la ceremonia del Fuego Nuevo era en muchos sentidos el rito fundamental de las culturas del altiplano central de México. Aquí, examinamos este ritual y su conexión a las cuevas, como se manifiesta en el Cerro de la Estrella, donde la última ceremonia del Fuego Nuevo fue celebrada por los mexicas en el año 1507. Sobre la base de las continuidades en el arte rupestre y las evidencias arqueológicas sugerimos que ceremonias del Fuego Nuevo ya se celebraban en el Cerro de la Estrella durante el Epiclásico (c. 750-950 d.C.), si no durante los últimos siglos del Clásico Temprano. Se presentan los resultados de las investigaciones y se contextualizan nuestras conclusiones en relación con las fuentes etnohistóricas que pertenecen a la ceremonia del Fuego Nuevo. También sugerimos que la estrecha relación entre cuevas y ritos del taladro de fuego se establecen por precedente mitológico registrado en los manuscritos etnohistóricos, en los cuales la aparición de seres humanos de Chicomoztoc – la legendaria ‘lugar de las siete cuevas’ – es seguido de cerca por el taladro del Primer Fuego, un aspecto importante que hasta ahora ha sido ignorado y descuidado por estudios recientes. Por esta razón, todos los ritos del Fuego Nuevo posteriores están esencialmente recreaciones de este Primer Fuego fundacional y materializaciones del pasado lejano.

**Palabras claves:** Cuevas, ceremonia del fuego nuevo, Cerro de la Estrella, geografía sagrada, Epiclásico, fuentes etnohistóricas

## INTRODUCTION

The New Fire ceremony was in many ways the most important calendrical celebration among central Mexican cultures. Today this ritual is best known from the ethnohistoric sources compiled in the 16<sup>th</sup> century by friars of the mendicant orders. Despite attempts to identify archaeological remains of New Fire ceremonies the most reliable Pre-Columbian sources as to these rituals remain the iconographic and epigraphic records of the Late Postclassic and Epiclassic and to a certain extent the Early Classic. The ethnohistoric sources relate that the New Fire was drilled at a temple erected on the summit of the mountain known as Huixachtlan or Huixachtecatl<sup>1</sup>, which is known today as the Cerro de la Estrella. At the summit of this mountain is a small temple and it is there that the New Fire was ignited. What is less well known is that the whole of the Cerro de la Estrella is an important archaeological zone that exhibits scores of caves and speleological features, four dozen rock art sites and a wide array of architectural features and structures (Montero and Brady 1999). As we will see, the Cerro de la Estrella was in many ways the focal point of the sacred geography of the Iztapalapa peninsula, attracting ritual use throughout the course of antiquity and as a result was widely modified by human agency.

Here we build on the results of the fieldwork conducted between 1997 and 1998 by the *Proyecto de Investigación, Protección y Adecuación de la Zona Arqueológica del Cerro de la Estrella*, of the Instituto Nacional de Antropología e Historia, and the 2001 project under the direction of Ismael Arturo Montero García (2002), as well as more recent documentation work conducted by Christophe Helmke since 2010. We have found that there is evidence for continuity from the Early Classic to the Postclassic and that the Cerro de la Estrella was the focal point of New Fire ceremonies for centuries before the Aztec officiated the ritual of 1507. After introducing the New Fire ceremony as we know it from the written sources of the 16<sup>th</sup> century, we go on to explore two particular cave sites from the Cerro de Estrella that are particularly important and illustrative for the present research. Thereafter we also explore the close connection between caves and New Fire rituals as recorded in manuscripts of the 16<sup>th</sup> century and outline the precedents set by myths of emergence and what we term the First Fire. Before all, however, we will provide some background on the Cerro de la Estrella as well as a short research history of the archaeological work conducted to date.

## THE CERRO DE LA ESTRELLA

The archaeological zone of the Cerro de la Estrella is notable for its physiography and its dramatic location within the landscape of the Valley of Mexico. The Cerro de la Estrella is a small mountain located at the very western extremity of the Iztapalapa peninsula that once separated the brackish waters of lake Texcoco from the freshwater of lake Xochimilco. The mountain rose some 225 m above the surrounding lakes and its highest peak has an elevation of 2 460 m, affording striking views of the whole of the Valley of Mexico. In the Postclassic the settlement of Colhuacan thrived at the western

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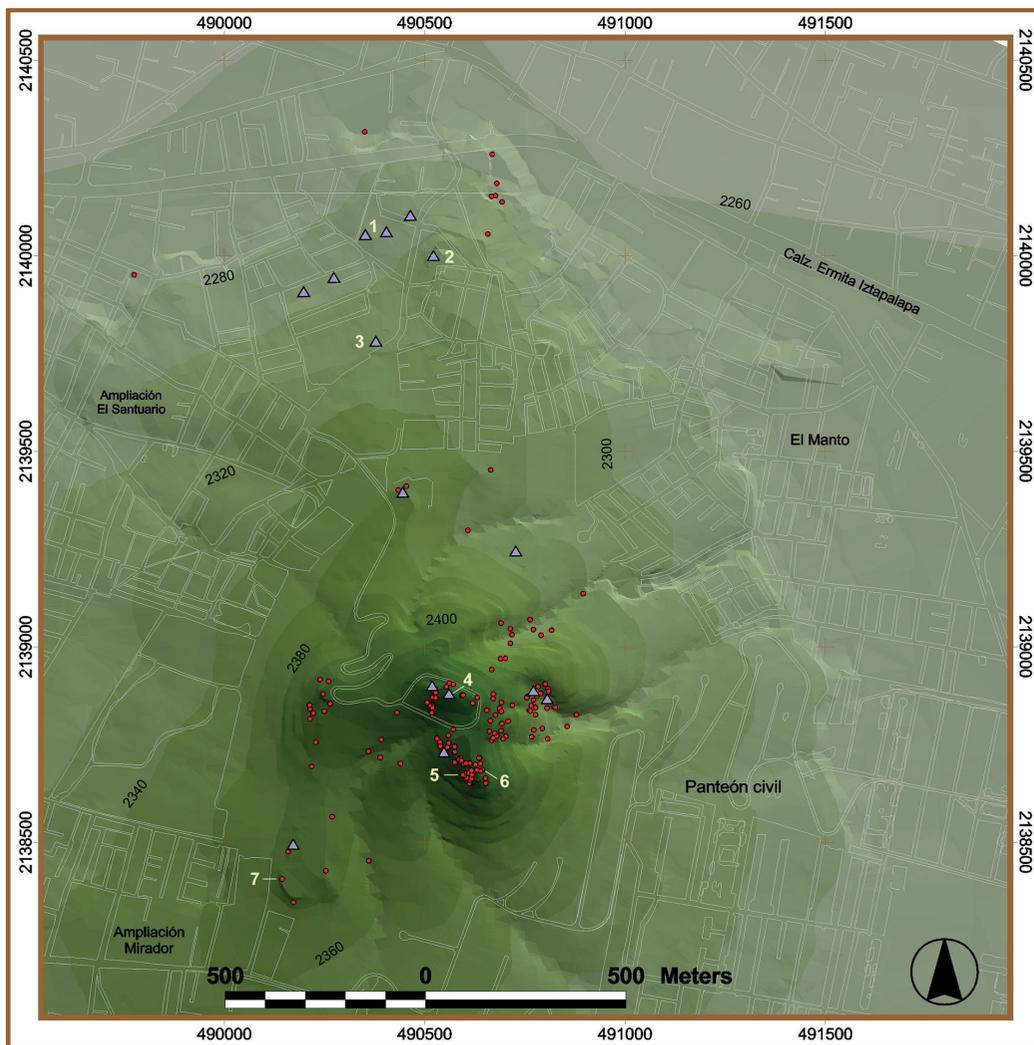
<sup>1</sup> The ethnohistoric sources written in the 16<sup>th</sup> century concur that the hill where the New Fire was celebrated in the Postclassic, was named /witzach-tlaan/ or 'place where *huizache* abounds'. Nevertheless, the orthography varies greatly from author to author, with fray Diego Durán and fray Bartolomé de las Casas providing the name as <Vixachtla>, fray Bernardino de Sahagún and fray Tomás de Torquemada as <Uixachtécatl> and <Uixachtlán>, Hernando de Alvarado Tezozomoc as <Huixachtecatl> and <Huixachtla>, which is also the name found on an early map of the area, dated to 1589 (Pérez Negrete 2002: 88-89). It would seem that the authors who provided two variants of the name were referring to the mountain range as /witzach-tekatl/, to the particular peak as /witzach-tekatl-tepeetl/ and to the area more broadly speaking as /witzach-tlaan/.

flank of the Cerro de la Estrella. Colhuacan was the capital of an important lacustrine *altepetl*, or city-state, and the area remained largely waterlogged, surrounded by dykes and raised fields until 1866, when an ambitious sanitation and drainage project was initiated under the orders of engineer Don Francisco de Garay (Salazar Torres 2011).

The ethnohistoric sources make it clear that the Aztec, as late migrants to the Valley of Mexico, owed a large measure of their prestige to their alliance and association with the Colhuaque, who ruled a preeminent kingdom in the Valley, initially serving as mercenaries for their new masters (Bierhorst 1992; Durán 1964: 80; Johansson K. 2007; Prem 1999). Despite the eventual advent of Tenochtitlan and the rise of Aztec power, via expansion and conquest, Colhuacan remained an important city since the Cerro de la Estrella was such a vital site in the sacred geography of the valley, but one that remained the preserve of that city-state. The ethnohistoric sources also suggest that the rulers of Colhuacan regarded themselves as descendants of the Toltec rulers of Tollan (Bierhorst 1992; Durán 1964: 80;



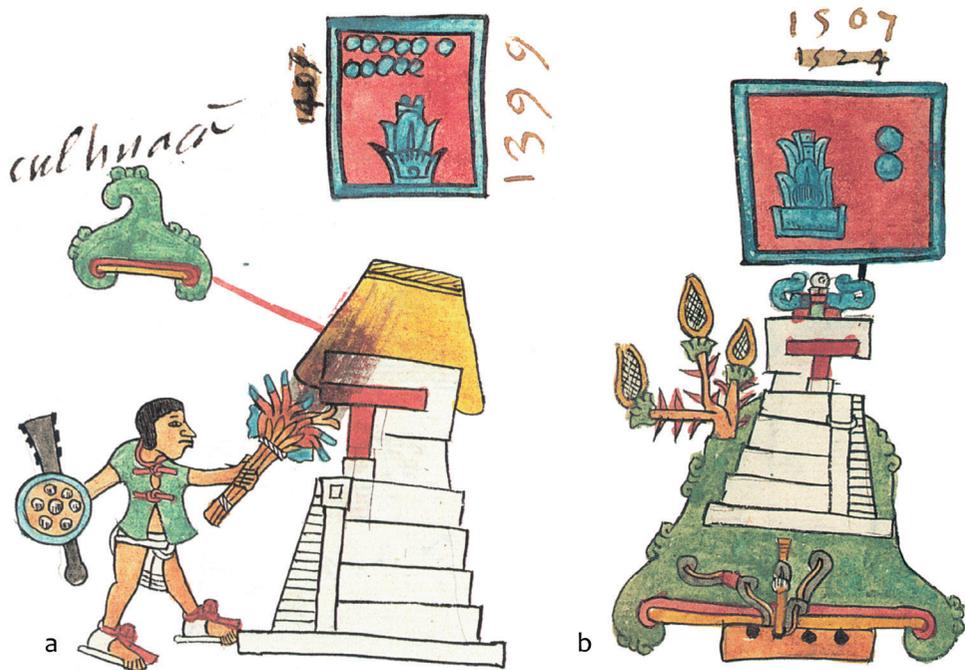
**Figure 1.** Top: Map of Mesoamerica showing the distribution of archaeological sites mentioned in the text (relief data © Natural Earth; map by Christophe Helmke). Below: Panoramic view of the Valley of Mexico, looking north, showing the location of Cerro de la Estrella and adjoining sites (panorama © Tomás Filsinger).



**Figure 2.** Map of the Cerro de la Estrella in relation to the modern urban fabric, showing the distribution of speleological features (red dots) as well as the remains of Pre-Columbian architecture (blue triangles). 1) Teotihuacan style compounds dating to the Early Classic. 2) Calvary built atop a *talud-tablero* platform. 3) Teotihuacan style compound occupied until the Epiclassic. 4) Temple erected at the summit of the Cerro de la Estrella where the last New Fire ceremony was celebrated. 5) La Encalichada cave (C-026). 6) Petroglyphic architectural model. 7) Tepetzingo cave (C-069) (map by Arturo Montero and Christophe Helmke).

Prem 1999; Séjourné 1991: 11-27), the early and paramount capital of Mesoamerica. As such it is not a coincidence that the Aztec were keen to appropriate and to continue ritual practices at the Cerro de la Estrella, due to the prestige and timelessness of this sacred place.

In Aztec writing, the toponym Colhuacan was consistently written as a mountain with a curved and almost coiled peak (Boone 2000: 36; Mundy 1996: 142; Peñafiel 1897: 63) (Figure 3a). Initially,



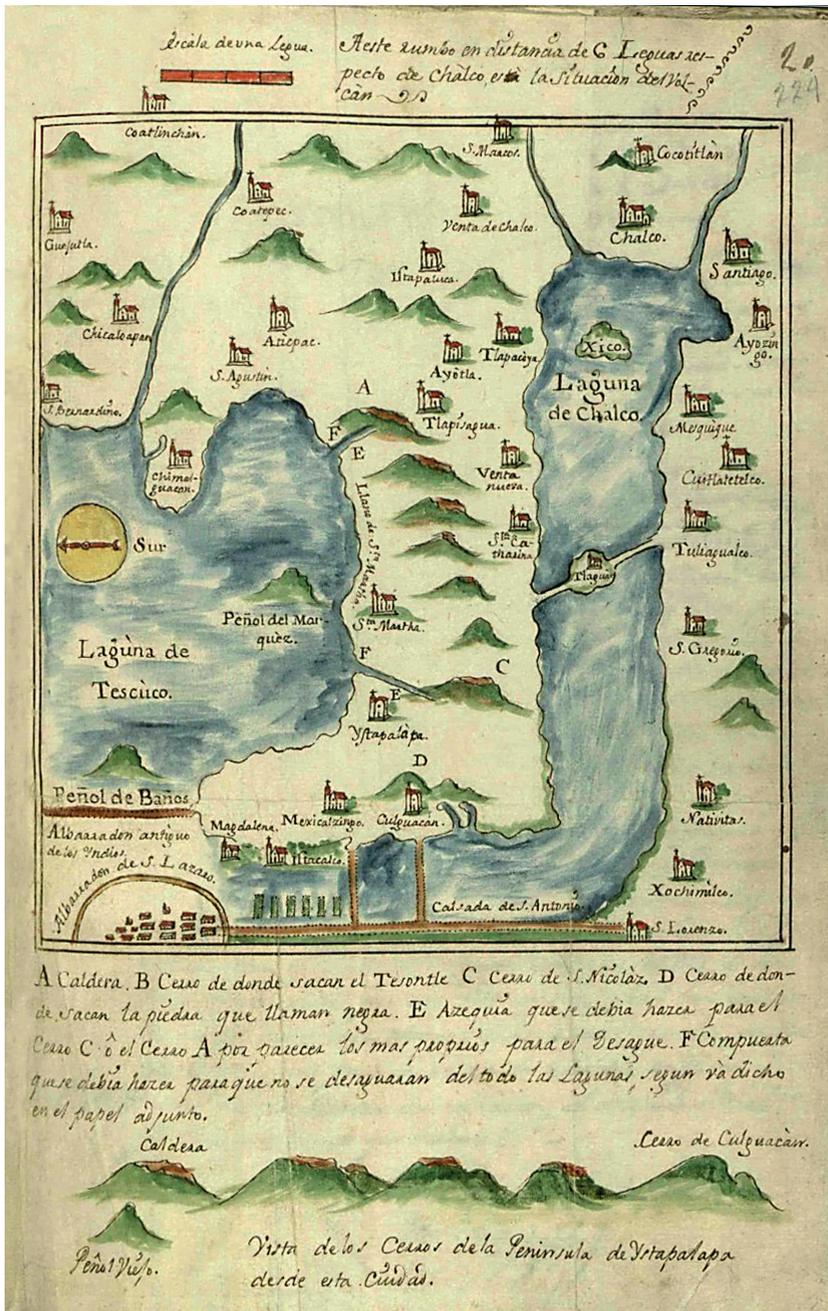
**Figure 3.** Details of the Codex Telleriano-Remensis: a) The conquest of Colhuacan in 1399 at the hands of the Aztec. Note the curved hill sign that spells the toponym (Fol. 29r). b) The New Fire celebrations of 1507 (Fol. 42r).

Laurette Séjourné suggested that this sign was drawn from nature since the Cerro de la Estrella has a very distinctive profile, its summit partially truncated and hunchbacked (Séjourné 1991: 37-38; Perry 1992: 33). The idea posited by Séjourné, that Colhuacan was an alternate name for the Cerro de la Estrella, before Aztec expansion and subjugation, can be verified by a manuscript by José Antonio de Alzate y Ramírez, completed in 1767, which shows the Iztapalapa peninsula and clearly labels the mountain separating the settlements of Colhuacan from Iztapalapa as <Cerro de Culguacán> (Figure 4). In addition, a series of documents now in the Carlos Linga collection, held in the *Staats- und Universitätsbibliothek* in Hamburg, presenting a lease of land also refer to the <cerro de culhacan>, an important source dating to 1613.

The glyphic sign used to spell the toponym in Aztec writing, functioned most likely as a rebus, wherein the curved peak is read as *kool-*, a root found in derived forms for things that are ‘curved, twisted, or scrolled’ (Karttunen 1983: 40; Molina 2001: 27v; Peñafiel 1897: 63), but bearing the intended meaning of ‘place of ancestors’, since *kool-li* is ‘grandfather, ancestor’ (Karttunen 1983: 40; Siméon 1977: 123) (Figure 3a). This place was therefore regarded as one of great antiquity and as we will see this can be borne out by the archaeology.

### The Cerro de la Estrella Today

Nowadays, the Cerro de la Estrella is protected by its status as an ecological conservation zone that is completely surrounded by the urban sprawl of Mexico City, and that of the Delegación Iztapalapa in particular. The area was declared a National Park by Mexican president Lázaro Cárdenas as early



**Figure 4.** Map of the Iztapalapa peninsula by José Antonio de Alzate y Ramirez, dated to 1767. Note the Cerro de la Estrella, clearly marked by the letter “D”, between the settlements of <Yztapalapa> and <Culguacan>. At the base, the panorama of the extinct volcanic range labels the distinctive profile of the Cerro de la Estrella as <Cerro de Culguacan> (photograph © Archivo General de la Nación).

as August 1938, and at that juncture the park was intended to encompass as many as 1 100 hectares (Dirección Ejecutiva de Conservación y Restauración 2002: 11, 13, 15). As of May 1991, however, due to a variety of injunctions and the establishment of urban development plans, particularly during the 1980s, the park has been reduced to a Natural Protected Area encompassing no more than 143 hectares (Dirección Ejecutiva de Conservación y Restauración 2002: 15-16). In 2000, president Vicente Fox signed a declaration that the Cerro de la Estrella should henceforth be considered a Zone of Archaeological Monuments a plan elaborated by INAH's *Registro Público de Monumentos y Zonas Arqueológicas* (Paz Avedaño 2014).

Despite these measures and increasing vigilance by the authorities as well as the construction of a large perimeter fence, one of the consequences of increasing urbanism is the encroachment made by squatters who have partially invaded the park and built residences, especially in the south-western and south-eastern portions of the zone (Dirección Ejecutiva de Conservación y Restauración 2002: 9; Paul 2011; Robles García 1989: 50-61). We will again mention some of the consequences of these encroachments as these are also affecting the archaeological sites (see also Paz Avedaño 2014). As the Delegación Iztapalapa exhibits lesser income than some of the adjoining neighbourhoods of Mexico City, the area is regularly scouted by gangs with fighting dogs and human corpses regularly crop up within the park, presumably the victims of gang-related conflicts and the dealings of *narcotraficantes*. Oddly, the local media usually suggest that these are victims of packs of feral and rabid dogs that are said to roam the hill (Quintero and Gómez 2013).

Today the Cerro de la Estrella is best known as the location where devout Catholics re-enact the Passion of Christ, most dramatically the Crucifixion and Descent from the Cross, during the Easter festivities (Ruiz Jaramillo 2011; Zugarazo Sánchez 2002; see also Burkhart 2011: 101-144; Lara 2004: 181-183). The Calvary, where the crucifixion takes place, is on the shoulder of the Cerro de la Estrella, some distance from the urban zone, but outside of the park proper.

Geologically, the Cerro de la Estrella consists of an extinct volcanic cone. This means that the majority of the lithological facies are comprised of volcanic tuff, basalts, and *tezontle* that rupture sedimentary strata of Quaternary lakebed deposits (Dirección Ejecutiva de Conservación y Restauración 2002: 4; Robles García 1989: 17-21, 23-29).

The vegetation of the Cerro de la Estrella is characterised by grasses (esp. *Setaria geniculata*) and pines (*Pinus* sp.), with rarer examples of nopal (*Opuntia* sp.), maguey (*Agave* sp.), and yucca (*Yucca filifera*), an abundance of exogenous eucalyptus trees (*Eucalyptus* sp.) and cypress (*Cupressus lindleyi*) as well as the eponymous and spiky *huizache* trees (*Acacia schaffneri*) that gave the hill its Postclassic name (Dirección Ejecutiva de Conservación y Restauración 2002: 7; Robles García 1989: 29-33).

## The Archaeology of Colhuacan and the Cerro de la Estrella

Archaeologically, the Cerro de la Estrella is best known for the small temple that has been erected on its highest peak (Figure 5), where the Aztec performed the New Fire ritual of 1507 (Figure 3b). This final New Fire ceremony is described in detail and related in several ethnohistoric sources that we will review below, when we provide a synopsis of these rituals. This temple was first excavated between 1974 and 1975, by Carlos Hernández Reyes, with the assistance of Roberto Jiménez Ovando, under the direction of Jorge Acosta (Hernández Reyes 1975) and its architecture was subsequently consolidated by Gerardo Cepeda Cárdenas (1975). Aside from the abundant mentions made in the ethnohistoric sources, the summit temple was relocated and reported as early as 1867, when José Fernando Ramírez reported that he ascended to the site in his edition of Diego Durán's *Historia de las indias de la Nueva España* (Pérez Negrete 2002: 87). Searching for this temple, Eduard Seler also ascended the mountain in 1889 and at its summit found the poorly preserved and much collapsed temple (Seler 1904: 290). Most recently the temple has been the subject of an intensive programme of



**Figure 5.** The temple erected at the summit of the Cerro de la Estrella. The penultimate phase architecture has been restored, leaving the outer terminal phase, constructed in anticipation of the New Fire ceremony of 1507, as the lowest courses in the foreground (photograph by Christophe Helmke).

conservation and analysis, conducted by Miguel Pérez Negrete (2002, 2003) between 1997 and 1998, as part of the *Proyecto Arqueológico Cerro de la Estrella*, under the direction of Nicolás García Ortíz (1997). The temple formed part of an architectural complex, involving the temple proper, facing west, onto an open plaza, that was accessed from a lower terrace to the west, by a series of stairs built into the partially modified side of the hill. Although only parts of the lowest terraces subsist today, the temple initially rose much higher and a small vaulted sanctuary crowned the terraced body, as is indicated by a series of fragmentary *almenas*<sup>2</sup> (Pérez Negrete 2002: 105). In its latest phase – presumably raised in conjunction with the New Fire ceremony of 1507, on the orders of Moctezuma Xocoyotzin (AD 1502-1520) – the temple measured 23,9 m (E-W) by 22,2 m (N-S). In all five different phases of construction have been documented. By area, the latest phase is a little over double the size of the earliest temple (i.e. c. 502 m<sup>2</sup> vs. 229 m<sup>2</sup>). The latest three phases are the ones that are best documented and those that are most securely dated, wherein the second and third phases have been attributed to the Colhuaque state and date to the Early Postclassic (AD 950-1150) and the Late Postclassic (AD 1150-1350), respectively (Pérez Negrete 2002: 91-106, 2003: 8-9). The final phase consists of a primary construction stage and minor refurbishments. Miguel Pérez Negrete (2002: 106) suspects that this phase of construction was initiated in conjunction with the New Fire ceremony of AD 1455 and that the

<sup>2</sup> Such *almenas* serve as decorative roof crests and frequently represent figurative elements and combinations of glyphs that appear to provide the name of a structure, a tradition that can be traced back to Early Classic Teotihuacan (Nielsen and Helmke 2014). In this case the fragmentary *almenas* that once adorned the latest phase of the temple represent circular bundles, complete with a knotted element at the top, framed by curving volutes that may represent smouldering fire, set in front of elongated elements, which undoubtedly represent a bundle of reeds – symbolising the 52-years that had elapsed – that was set alight as part of the New Fire ceremonies.

refurbishments were made around 1507 in preparation for the last New Fire ceremony. Alternatively, both of these phases are associated with the final New Fire ceremony of the 16<sup>th</sup> century, immediately before the Spanish Conquest. What is all the more remarkable is that preparations for the second phase, entailed the partial dismantlement of the first phase, which may date to the Epiclassic period (c. AD 750-950) (Pérez Negrete 2002: 92, 2003: 7). As such the temple at the summit could have witnessed a dozen or so New Fire ceremonies over the course of six centuries.

Archaeological investigations have helped to flesh out the history of the locality, but most of these have been limited to salvage interventions or small test-pit excavations, given the urban fabric of the area. Nevertheless, some of the earliest stratigraphic excavations are those that have been conducted in the area that was once occupied by Colhuacan, at the western foot of the Cerro de la Estrella. There, excavations by Josephina Oliva and Eduardo Noguera were undertaken between 1959 and 1962 in the area that was occupied by the settlement, and by Corona Olea in 1958 in the Exconvento de Colhuacan, on land that was ceded by the Franciscans to monks of the Augustinian order, who in the latter portion of the 16<sup>th</sup> century erected the first convent and church (Perry 1992: 33-34; Séjourné 1991: 31; Venegas and Bedolla 1995). These investigations were reported by Laurette Séjourné (1991) who accounts for the ceramic materials recovered in the 28 test-pits sunk into the Exconvento, as well as the 2 trenches and 7 test-pits excavated in the settlement area. The meticulous ceramic analyses undertaken by Séjourné demonstrate the importance of the Postclassic settlement in the area, as represented by the prevalence of Aztec I-III ceramics, but these also attest to the existence of an Early Classic settlement in the area – based on the presence of ceramics with ring bases, *candeleros*, Thin Orange vessels and figurines – which she dated to what was then known as the Teotihuacan IV phase (Séjourné 1991: 32-33, 35-36, 41, 43, 45). Today this phase can be equated to the Metepec phase and as such be dated to between AD 650 and 750 (see Rattray 2001: 397-399).

In 1969 Richard Blanton conducted a survey and a series of surface collections on the Iztapalapa peninsula as part of the *Coordinated Anthropological Research in the Valley of Mexico*, under the direction of Eric Wolf (see Blanton 1972). This survey revealed the presence of Prehispanic settlements from the Late Preclassic onwards, which are now sadly lost under the urban sprawl of the area (Felipe Valencia 2002: 36, 38). Interesting are the sites reported by Blanton (1972) that yielded evidence of Early Classic occupation as well as Teotihuacan influence, thereby confirming the finds made by Séjourné and her colleagues (Felipe Valencia 2002: 42; Vargas López 2013: 109-111). Most significant, however, are the architectural remains that closely compare to the residential compounds of Teotihuacan, sites that were brought to light by the excavations of Manfred Reinhold (1979) between 1977 and 1979. The compounds were built of local stone, exhibit walls with *talud* bases and mouldings resembling *tableros*, with structures fronted by pillared porticoes, looking onto open patios. As such these compounds could not be more typical of Teotihuacan architecture (e.g. Manzanilla 2001; Séjourné 1966). A test-pit sunk into the patio of one such compound revealed a multiple burial containing four infants, and the remains of a mammal, possibly a dog, as well as ceramic objects (Felipe Valencia 2002: 44). Based on the associated finds this deposit can be dated to the fourth century, which corresponds to the Early Xolalpan phase (AD 350-450) at Teotihuacan (Rattray 2001: 203). Continued excavations revealed that the earliest underlying structure could be dated to the start of the 3<sup>rd</sup> century or the start of the Early Tlamimilolpa (AD 200-250) phase (Rattray 2001: 163).

Most recently, as part of restoration works around the Calvary where the Passion plays are performed, archaeological interventions were made by the *Proyecto de Investigación Antropológica Cerro de la Estrella* between 2003 and 2004, under the direction of Jesús Sánchez, revealing, much to everyone's surprise, the remains of Prehispanic architecture (Flores Jiménez 2008; Valadez 2006; see also Felipe Valencia 2002: 41-44; Vargas López 2013: 110-111). As it turns out, the Calvary established in the colonial period, was built precisely atop this Early Classic *talud-tablero* temple, which, based on associated finds, has been dated to between c. AD 350 and 450, corresponding to the

Late Tlamimilolpa phase at Teotihuacan (see Rattray 2001: 435). This temple was built on the shoulder of the hill, a little over a kilometre north of the Aztec temple, and as such may explain the absence of Early Classic materials at the summit. The picture that emerges is thus one wherein the original ritual site was built on the shoulder of the mountain and was only shifted to the summit at some juncture between the Epiclassic and Early Postclassic.

Added evidence for Epiclassic presence in the area is afforded by a series of salvage excavations undertaken between 1976 and 1977, by the *Proyecto Cuenca de México*, under the direction of Jürgen Kurt Brügemann, in the area that is now occupied by the Centro Social Villa Estrella (Martz de Vega 2002), a site that is located on the access road to the Cerro de la Estrella, some 165 m south-west of the Calvary. The extant archaeological remains have been the focus of documentation and conservation work conducted in 1997 as part of the *Proyecto Arqueológico Cerro de la Estrella* under the direction of Nicolás García Ortiz (1997; Martz de la Vega 1998, 2001, 2002). These investigations have revealed a series of architectural phases, from contexts resembling the compounds that were mentioned earlier. What is significant is that these compounds were occupied from the Early Classic period onwards, exhibiting *talud-tablero* architecture in the earliest phase and an abundance of ceramic materials that can be dated to the Coyotlatelco phase AD 750-950, which neatly corresponds to the Epiclassic period in the area (Martz de Vega 2002). As a result it is becoming increasingly clear that there are very few gaps in the sequence of human occupation documented for the Cerro de la Estrella, spanning from the Tlamimilolpa materials in the compounds excavated by Reinhold, to the pyramidal platform excavated by Sánchez at the Calvary, to the Metepec ceramics documented by Séjourné, to the Coyotlatelco compounds reported by Martz de la Vega, and the earliest phase of the temple at the summit of the mountain. This span is nearly continuous and covers almost eight centuries from the Early Classic to the Epiclassic (c. AD 200-950), suggesting both demographic and cultural continuity in the human populations that occupied the area and made ritual utilisation of the Cerro de la Estrella.

## Caves and Rock Art

Other features of archaeological significance include the many speleological features, rock art and architectural elements. In all the register of rock art, conducted by the late Mateo Wallrath, revealed 184 distinct petroglyphs in 46 sites (Montero García 2002: 183-185; Wallrath 2002), although a more recent survey by Raúl Arana Álvarez suggests that the number may be closer to 210 (see Paul 2011). The most common motifs include simple anthropomorphic faces (< 20 %), followed by linear notches representing some type of counting or tabulation device (c. 15 %), and the faces of Storm gods or *tlalooke* of various periods (c. 10 %) (Montero García 2009; see also Wrem Anderson and Helmke 2013).

Speleological features are widely distributed across the hill, and were surveyed by José Montiel Castro (2002) and his team at the invitation of Montero García. This detailed survey confirmed that all the caves occur in volcanic geology, and documented as many as 144 speleological features, including caves, lava tubes and rockshelters. All of these sites were the subject of mapping by means of fibreglass tape measures, magnetic compasses, clinometers, supplemented by transit surveys coupled with a LED illumination device (Montiel Castro 2002: 25). The detailed catalogue of these caves provides a range of data and was completed in 2001 and has since been revised by Montero García (2013). Noteworthy features include the caves wherein walls and flooring surfaces have been partially encased in stucco in antiquity (Montiel Castro 2002: 26-27). Most, if not all, of the cavernous features found in the upper reaches of the Cerro, in the area that is constituted by conglomerates of volcanic tuff, appear to be human-made and in large measure resemble quarries (Montero and Brady 1999). Since the materials extracted by such quarrying appear to have been removed, potentially for use as building materials, one might be hesitant to conclude that the resulting negative features are in

themselves culturally significant. Nevertheless, in Nawaatl all caves, be they natural or human-made, are labelled as *oostootl* ‘cave’. This is made clear from an entry in the Florentine Codex, which for <*Xalozotl*> provides the following gloss: ‘Cave from which sand is removed. The sandy *tepetate* which is hollowed out is called “sand cave” [...] It is a place of magic, a supernatural place, a lurking place, a hiding place, a crouching place’ (Sahagún 1963: 276). Furthermore, in the de Alzate y Ramírez manuscript of 1767, the Cerro de la Estrella is labelled as “*Cerro de donde sacan la piedra que llaman negra*” (see Figure 4). This very interesting annotation confirms that the stone extracted from the Cerro de la Estrella was put to use in one or another industry. Nevertheless, considering the importance of caves in Mesoamerican cosmology and the salience of the Cerro de la Estrella in the sacred geography of the area, it should come as no surprise that many of these artificial cavernous features were, and continue to be, treated as caves, a practice seen elsewhere in Mesoamerica, most notably at sites in the Guatemalan Highlands, such as Utatlan, Mixco Viejo and Esquipulas, as observed by James Brady and George Veni (1992; see also Brady 2004). Within the Valley of Mexico, the most important artificial caves are undoubtedly the tunnels excavated out of volcanic tuff at Teotihuacan, including that beneath the Pyramid of the Sun, which has been cogently studied by Doris Heyden (1973, 1975; Brady 2000) and that which is currently being excavated by Sergio Gómez Chávez below the Pyramid of the Feathered Serpent (2012, 2013). In addition, a small enclosure at the base of the Aztec Templo Mayor, dating to phase IV and designated as Chamber 1, has been interpreted by Eduardo Matos Moctezuma (2002: 52, Fig. 40) as an architectural emulation of a cave at the base of Coatepec (see also López Luján 2012),<sup>3</sup> the mythic mountain where Huitzilopochtli, the patron deity of the Aztec, defeated his siblings and overcame his uterine sister, Coyolxauhqui, dismembering and decapitating her, and casting her lifeless limbs down the side of the mountain (Sahagún 1978: 1-5). The presence of such a cave, as an integral feature of the mythic Coatepec, is of great importance and is a pairing that we will return to, especially as it concerns the Cerro de la Estrella.

## THE NEW FIRE CEREMONY

Our knowledge of the New Fire ceremony stems from the ethnohistoric sources that describe the ritual in greatest detail. Whereas there can be no doubt that these sources are the earliest and most complete accounts, thereby affording us a privileged vantage on the rituals that together comprise the New Fire ceremony, a few caveats are in order. Chief among these is that the accounts given in the ethnohistoric sources are retrospective and do not describe events that were actually witnessed by their authors. Second, the accounts of the New Fire ceremony describe the manner in which the Aztec priests conducted the ritual, under the auspices of their ruler Moctezuma Xocoyotzin. Thus, the ethnohistoric sources are accounts of *one particular* New Fire ceremony, namely that celebrated in AD 1507, the ultimate one before the Spanish conquest. In addition, no information is provided as to how the New Fire ceremony was celebrated by the Colhuaque, among others, before they were conquered by the Aztec and their ritual site appropriated. And finally, the ethnohistoric sources describe the rituals from a European and Catholic vantage and thus the actions and rationales are all couched in Euro-centric language and bias. As a result, even the designation “New Fire” stems directly from the Latin wording of Catholic liturgy – *Novem hunc ignem sanctifica*, ‘blessed be this new fire’ – where an analogy is established to the bonfire of Easter Vigil, the nocturnal mass that commemorates

<sup>3</sup> The interpretation of this chamber as an architectural emulation of a cave is supported by several ethnohistoric sources. Among these is the account of Diego Durán (1971:183) that describes the Aztec temple of Yopico as containing “an underground place or vault” that held the skins of flayed individuals. To this Sahagún (1981:5) explicitly adds that after use flayed skins were cast “into a cave in the pyramid which they called Yopico”.

the resurrection of the one that gave himself for the salvation of humanity (Helmke and Montero García 2016). All of these elements are remarkable points of correspondence as is the cult of the Señor de la Cueva, at the parochial church of Iztapalapa at the foot of the Cerro de la Estrella (Ruiz Jaramillo 2011) and the cult of the Señor del Calvario – popularly known as the “Señor de la Cueva” – celebrated in a church of Colhuacan, which is built atop a Prehispanic platform that encloses a cave (Red Nacional de Información Cultural 2014). These churches and the liturgy performed within their precincts thereby preserve the ritual role of caves in the area, by syncretically merging the biblical sepulchre with subterranean features. All of these correspondences, including the establishment of the Calvary atop the *talud-tablero* temple, where we suspect New Fire ceremonies were conducted in the Early Classic, point to deliberate parallelisms rather than fortuitous equivalences. As a result the ethnohistoric sources should be subjected to careful and critical reading, rather than accepting these at face value and succumbing to the temptation of projecting the information wrought from the written sources to all the earlier New Fire ceremonies of the Mesoamerican past.

With these words of caution, we can introduce what is known of the New Fire ceremony from these ethnohistoric sources. Excellent studies pertaining to this ritual include those of Alfredo López Austin (1963), Johanna Broda (1982, 2002), Ferdinand Anders, Maarten Jansen and Luis Reyes García (1991: 33-40), as well as Silvia Trejo (2002), and we base our descriptions on these studies as well as the primary historical sources, particularly the account of fray Bernardino de Sahagún (1953: 25-32) preserved in the Florentine Codex. The ethnohistoric sources also make mention to the temple at the summit of the Cerro de la Estrella, as the place where the New Fire ceremony was celebrated. These include accounts by fray Toribio Motolinía, fray Bernardino de Sahagún, Francisco López de Gomara, Hernán Cortés, Hernando Alvarado Tezozomoc, and fray Bartolomé de las Casas (Pérez Negrete 2002: 88). In addition, both the ritual and the sanctuary are represented in codical sources, most notably in the *Codex Telleriano-Remensis* (Quiñones Keber 1995), the *Codex Borbonicus* (Anders *et al.* 1991) and the *Codex Vaticanus 3738* (Loubat 1900).

At the very heart of the New Fire ceremony is fire itself and we cannot overemphasize the importance of fire to pre-industrial populations. Fire was a source of warmth, protection and a means of processing nourishment and as a result fires burned almost continuously in each household, the hearth representing not only the centre of the homestead, but also the cosmos in diminutive form. Due to the quotidian and ritual importance of fire it is difficult to imagine how traumatic and critical it would have been to be without fire, and to sit helplessly by the side of a cold and ashen hearth. Yet, this is precisely what the Aztec state, its rulers and priests, demanded of their population at the turn of each 52-year period. The timing of the event is said to have been dictated by the permutations of the calendar, since each year was named after one of four days, known as the “year-bearers”, that were qualified by one of thirteen numerical coefficients, yielding 52 possible permutations in all. With the passing of each year fire priests known as *tlenamakak* or ‘fire vendors’ bound the long slender culm of a reed with rope. This action was known as the <*xiuitl molpia*> or <*xiuhmolpilia*>, ‘the binding of the years’ (see Molina 2001: 159v; Sahagún 1953: 25), and when this bundle comprised 52 reeds, the calendar had run its course and was therefore nearing once again its initial point of incipience. Fantastic examples of stone skeuomorphs are known, bearing boldly the date of the New Fire ceremony when these were burned and reduced to ashes (Figure 6). These stone simulacra thereby preserve in material and tangible form, in perpetuity, that which was but temporal and transient. Whereas the intervals separating New Fires may well have been fairly regular, we also know that some New Fire rituals were held in conjunction with royal accessions, or were shunted to more propitious times, in years of misfortune, famine and military defeat (see Elson and Smith 2001: 170; Hassig 2001: 114; Diel 2008: 37).

In anticipation of the great ceremony, the people extinguished their fires and during this time, the population returned to a liminal state, to the time before civilized life and without cooked food, a period that apparently spread over four or five days, a span of days known as the *nemontemi*, which



**Figure 6.** Stone skeuomorphs of the reed bundles, commemorating particular New Fire ceremonies. a) Late Post-classic sculpture celebrating the New Fire ceremony on the date ‘two reed’ (photograph by Michel Zabé). b) Aztec bundle celebrating a New Fire in the year ‘one reed’ (photograph by Christophe Helmke). c) Early Classic stone simulacrum recovered from excavations of the *adosada* of the Pyramid of the Sun at Teotihuacan (after Berrin and Pasztory 1993: Cat. 8).

were regarded as bleak and gloomy days, also among other Mesoamerican cultures (see Broda de Casas 1969: 18-19; Johansson 2005: 156-174; Tozzer 1941: 135, 284). Considering the liminality and ritual propriety of the period, and fearing for the fate pregnant women and children, these sought shelter in sheds and wore masks of maguey leaves to protect their faces, with small slits for the eyes and mouth. In all the corners of the land, old and broken utensils were thrown away and shattered, including ceramic serving vessels and grinding stones. The fires were also extinguished in the temples and altars and the land returned untamed to darkness.

But hope remained, as the *tlenamakak* donned the attire of the gods (see López Austin 1963: 79, 80), including the fire deities known as the *xiwkoowaatl*, or ‘fire serpents’, and began a solemn procession as deities from the ritual centre of Tenochtitlan to the Cerro de la Estrella. All the way the priests were heard murmuring and nervously rehearsing how best to ignite the fire. The greatest fear was that the fire could not be ignited, which would be bad portents for the fate of the universe since the world would be overrun by monstrous creatures, the world would be plunged in darkness eternal and time would stand still. The priests reached the summit of Huixachtecatl near the middle of the night, and began their preparations at the temple, overlooking the whole of the Valley of Mexico. A captive, specially selected for the occasion, was lain on the altar and sacrificed. The kindling was made ready and was nestled into the open chest cavity of the captive and the priests waited in silence for a particular constellation of stars to rise above the eastern horizon. Some sources relate that the stars were a cluster known as the *tiaankistli* <*tianquiztli*>, the ‘marketplace’, which is recognized as being the Pleiades in the constellation Taurus (Sahagún 1953: 60; see López Austin 1963: 77; Broda 2002), whereas others emphasize the importance of a grouping named *maamalwaastli* <*mamalhuaztli*> ‘the fire drill’, in the constellation Orion (Sahagún 1953: 11-12; Sahagún 1993: 154).<sup>4</sup> At this point the senior priest began drilling the fire with the *maamalwaastli* on the captive’s chest. Successful, the fire was lighted and the large reed bundle that represented the years elapsed, was ignited. The people waited with bated breath and kept their eyes fixed on the mountain, in the hopes of catching a glimpse of the New Fire, the start of a new era and the promises of a rising sun. Shouts of relief echoed throughout the Valley of Mexico and people made auto-sacrificial offerings of blood, eased and thankful to the gods for preserving their universe.

The New Fire was borne from the Cerro de la Estrella by runners to the ritual centre of Tenochtitlan and to the brazier of Xiuhtecuhtli, the supreme deity of fire, as well as *Huitzilopochtli*, the patron deity of the Aztec, from whence the fire was distributed to the other temples and from the neighbourhood shrines to the common houses, thereby spreading the fire throughout the land and all could partake in its beauty, vigour, warmth and protection once more. The fire was a blessing from the gods and the New Fire ceremony was interpreted as a means of materializing stellar fire on earth, by drawing it down from the heavens and channelling it via the drilling pin, by the action of the *xiwkoowaatl*. As a ritual orchestrated by the priests, the supreme Aztec monarch essentially offered the holiest of fires to his population and all shared it, thereby reinforcing not only their bonds to each other, but also to the social order, wherein the people owed fealty and were indebted to their ruler, for the fire that burned in the heart of their homes.

Another aspect that the ethnohistoric sources agree to is that the earliest New Fire ceremony was celebrated in time immemorial when the ancestors of the Aztec roamed the land, after they departed from their mythic homeland. The same sources suggest that one of the first New Fire ceremonies was celebrated at Coatepec (Johansson K. 2007: 36-37; Quiñones Keber 1995: 56). We will return to

<sup>4</sup> Despite the abundance of sources and the great agreement that is found in them, one is left to wonder as to the origin of the modern name given to the peak upon which the temple is situated. It is known as the Cerro de la Estrella and folk etymologies propose that it stems from the name of a nearby ranch that was called the “Rancho de la Estrella” (Brinckmann 1976; Pérez Negrete 2002: 89; Piho Lange 1996: 60; Robles García 1989: 38). Nevertheless, an early manuscript in the Carlos Linga collection of the *Staats- und Universitätsbibliothek* in Hamburg, provides a drawing of the mountain in relation to Colhuacan and the Calvary, which is peppered with extensive captions (see Ruiz Jaramillo 2011: 37; Brinckmann 1976; Wiebke von Deylen, pers. comm. 2015). This plan may date to as early as 1613, and at the summit a star is clearly marked, indicating that already by this time the Cerro de la Estrella was somehow tied to stars. Elsewhere, the senior author has suggested that it was the stellar observation conducted as part of the New Fire ceremony, and which in many ways was the culmination of the ritual, confirming that preservation of the universe, that gave the site its name, one which since then has been translated to Spanish, by means of calquing (Helmke and Nielsen 2014: 89).

these aspects when we examine the codical sources pertaining to foundation myths connected to fire ceremonies. Having thus reviewed the New Fire ceremony we now turn to examine two particular caves of the Cerro de la Estrella.

### TEPETZINGO (C-069)

The site designated as Tepetzingo (altitude: 2370 m AMSL) is among the smaller caves on the Cerro de la Estrella and is part of the Grupo Meridional in the south-western portion of the zone<sup>5</sup> (Montero García 2002: 198, Fig. 23). Most of the caves in this area are comprised of large irregular and angular blocks of basalt and are the product of collapse. To the north of C-069 are a series of depressions that resemble dolines, or sinkholes in the initial phases of collapse (Jennings 1985: 110-111). Recent earthquake activity has also revealed several chambers below adjacent urban areas (Martínez 2011; Hernández 2014). Some of the caves have high ceilings and large chambers, measuring up to 20 m (Montero García 2002: 198). In contrast, the C-069 cave measures only 3,20 m long, and c. 1,50 m wide, has a steep incline and is completely penumbral from the dripline inwards (Montiel Castro 2002: 25). The entrance measures 1,60 m wide and only 0,68 m high. As such entry into the cave is exclusively by crawling. Emanating from the breakdown is a relatively strong air current, indicating that the passage continues below. The cave extends to the east from a depression measuring c. 3,4 m from E-W and 3,7 m from N-S, undoubtedly brought about by collapse and subsidence of a passage below.

The homesteads that have been established on either side of the cave are those of squatters that have infiltrated the park and whereas they have proved amiable on most occasions, at times have also resorted to intimidation and have blocked access for various research teams (Montero García 2013: 69). Most distressing is that the cave is now used as a local garbage dump for the homesteads established in the vicinity. Thus, most of the cave is choked by empty bottles and glass shards, plastic bags, wrappers, Styrofoam cups, old tarps, tattered clothes and old footwear. Artefactual remains observed on the surface within the cave are few and limited to a handful of undiagnostic body sherds (Montiel Castro 2002: 26). A programme of cleaning and excavation both within the cave and at the mouth of the cave would serve to better clarify the site's archaeological deposits.

### Petroglyphic Panel PT-12

What sets this small and otherwise unassuming cave apart are the two important petroglyphic panels found at the western edge of the concave depression and to the north of the cave's entrance (Montero García 2002: 185; Wallrath 2002: 208) (Figure 7). The first, designated as PT-12, is rendered on the plane surface of a triangular boulder to the west (Figure 8). Recent seismic activity appears to have slightly dislodged this boulder since its carved surface was more tabular, when it was initially examined in 2001. Detailed inspection of the boulder reveals that the entirety of the broadly triangular surface was carved to form a single coherent petroglyphic panel, measuring c. 116 cm high and 81 cm wide. The whole surface has evenly weathered and documenting the relatively faint carving required raking light to emphasize the details. In so doing certain elements were made apparent and chief among these are two circular glyphs, representing so-called "Pinwheel" glyphs or Glyph E to use the designation employed by Alfonso Caso (1928: 32). These glyphs are part of the sign inventory

<sup>5</sup> Alternate and provisional fieldnames by which this cave has been known include Macalochin Uno (Montiel Castro 2002: 26) and Trece Cóatl (Montero García 2013: 69). During the more recent surveys by Raúl Arana Álvarez this area appears to have been referred to as Matlalotzin (see Paul 2011).



**Figure 7.** Plan of the Tepetzingo cave (C-069). Note the distribution of the petroglyphic panels, as well as the modern trash deposits (plan and survey by Christophe Helmke and Alejandro Cañas).

of central Mexican writing during the Early Classic and Epiclassic and either undergo great stylistic variation in the Early Postclassic, or fall into disuse, disappearing from the signatory, since these do not readily resemble any of the known day signs of Late Postclassic Aztec writing. Whereas some researchers have compared Epiclassic examples of these signs to Aztec glyphs including that for *weey tek<sup>w</sup>ilwitl*, ‘great lord festival’ (Valencia Cruz and Bocanegra Islas 2013: Fig. 60) and *xiwitl*, ‘turquoise’ (Foncerrada de Molina 1993: 133-134), recent research by Karl Taube (2011: 78-80) on Teotihuacan examples instead suggests that these signs represent highly stylized flowers and as such would name the 20<sup>th</sup> day of the 260-day ritual calendar, which is analogous to the *toonlpoowalli* of the Aztec. The circular cartouche of these glyphs confirms their calendrical function as day signs, and betrays the Early Classic date of these glyphs. This unexpected conclusion stems from the fact that the shape of day sign cartouches in central Mexican writing evolve steadily through time, starting from their circular form in the writing of Early Classic Teotihuacan to the perfectly squared frame of Late Postclassic signs, via the rounded squares that are characteristic of the intervening Epiclassic (Helmke and Nielsen in prep.). The additional elements of this petroglyphic panel are indistinct, although a large dot for the numeral ‘one’ may accompany the upper Pinwheel glyph, thereby completing this calendrical notation. The coefficient of the lower sign is weathered beyond recognition and what be a simple anthropomorphic face is placed laterally between the two glyphs, in addition to a scrolled element below. Whereas the message of this panel is uncertain it seems to commemorate a particular

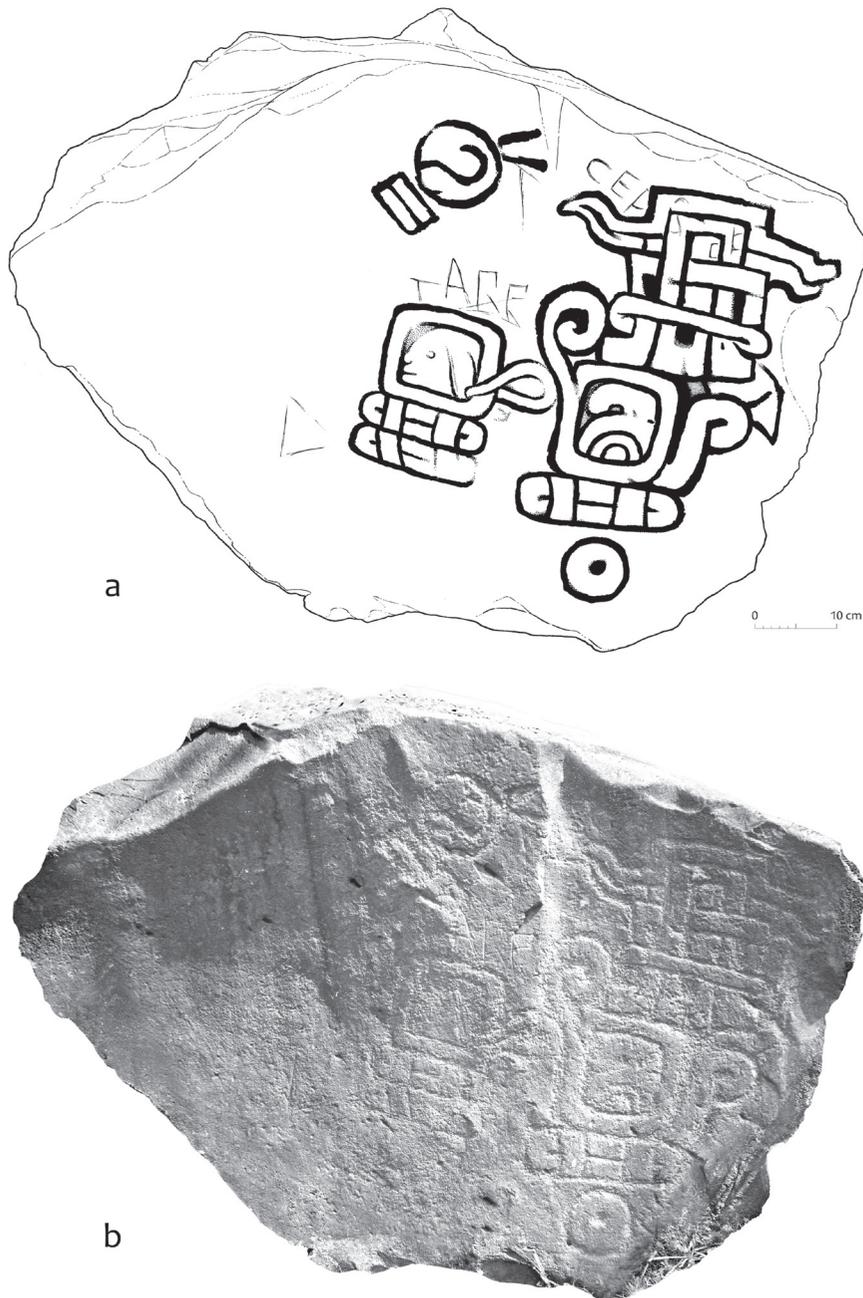


**Figure 8.** Photograph with raking light of the petroglyphic panel (PT-12) to the west of the entrance to the Tepetzingo cave (photograph by Christophe Helmke).

event, as is implicit by the calendrical notations, and what is really surprising is that the panel can be dated to the Early Classic, thereby confirming human presence on the Cerro de la Estrella and utilisation of its caves during Teotihuacan's apogee.

### **Petroglyphic Panel PT-11**

The second petroglyphic panel, designated as PT-11, was engraved onto the face of a large and irregular block of basalt, just to the north of the cave's entrance (Figure 7). The carving forming this panel, which measures 112 cm wide by 66 cm high, was rendered in a very clear and formal style and thereby represents the most prescribed carving found on the Cerro de la Estrella (Figure 9). Even a quick perusal reveals that this petroglyphic panel records well-preserved evidence of writing and not abstract figurative or geometric elements that are otherwise typical of rock art. As such the signs appear to have been carved by a trained sculptor, perhaps acting on assignment, although certain



**Figure 9.** The petroglyphic panel (PT-11) that frames the northern edge of the entrance to the Tepetzingo cave. Note the modern graffiti affecting the petroglyphic panel. a) Drawing based on photographs and inspection of the original (drawing by Christophe Helmke). b) 3D photocomposite model (by Christophe Helmke and Tobias Richter).

details, including the finish and the uneven edges of the lines betray that this carving was rendered somewhat expediently, albeit masterfully. The text records three glyphs, each associated with numerical coefficients, indicating that we are once more looking at a grouping of calendrical notations.

In the middle we can see the partly eroded head of a rabbit, rendered in profile within a cartouche. The rectangular cartouche with rounded corners indicates that we are examining an Epiclassic text, one that postdates PT-12 by several centuries, and as such clearly represents a later addition to the symbolic messages recorded at the cave's mouth. Below the rabbit are two bars representing the numerical coefficient, indicating that the glyph records the date 'ten rabbit', involving the 8<sup>th</sup> day of the 260-day calendar. A small looped cord is appended to the edge of the cartouche, which is an Epiclassic convention for representing a simplified tumpline, thereby providing the record of a named year, since these are only found with the four days named 'house' (3), 'rabbit' (8), 'reed' (13) and 'flint' (18), corresponding to the year-bearers known for Postclassic cultures of Central Mexico (Caso 1962: 71-73; Nicholson 1966; Sáenz 1967: 34-36). This means that Epiclassic cultures recognised precisely the same set of year-bearers, something that has been borne out by recent epigraphic research (Helmke and Nielsen 2011: 12-20, 2013: 394-401). What is interesting is that the looped cord appears predominantly in examples of western Epiclassic writing and as such may be a regional scribal practice since it is absent at other Epiclassic sites such as Cacaxtla and yet predominates at Xochicalco and Teotenango (Helmke and Nielsen in prep.). This confirms the regional affiliation of this important Epiclassic text as initially suggested by some of our colleagues (e.g. Wallrath 2002: 208; see also Montero García 2002: 185, 198; Paz Avedaño 2014).

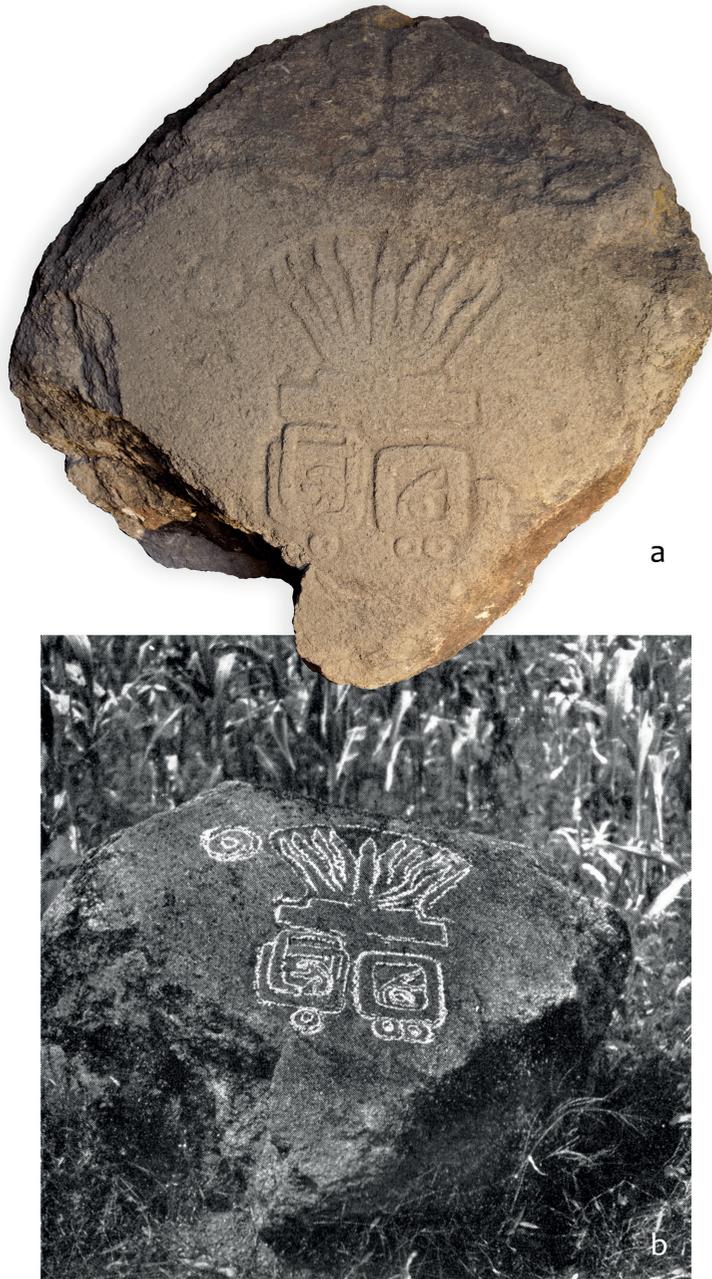
The largest glyph of the text dominates the southern, or right, portion of the panel and represents a so-called Reptile Eye glyph coupled with the numeral six, rendered below, the whole topped by an elaborate Year Sign. Whereas the identity of the Reptile Eye glyph has been debated for some time (see Beyer 1921; Caso 1961, 1962: 53-55; von Winning 1987: 73-74), good evidence now exists to suggest that this is a sign that represents the 13<sup>th</sup> day of the 260-day calendar, making it equivalent to the day named *aakatl*, 'reed', of the Aztec calendar (Helmke and Nielsen 2011: 11-12, 2013: 393-394). Significantly, this means that the Reptile Eye glyph is also one of the year-bearers and helps to explain the Year Sign that tops this day sign, since it represents a particular type of crown or headdress that was worn by exalted individuals, but allegorically also by day signs, to mark them as crowned and thereby ruling as namesakes over a particular year (see Stuart 2008). It also bears remembering that the Aztec preferentially celebrated New Fire ceremonies in years named *aakatl*, 'reed' (Figure 6a) and it is in this regard that the sinuous scrolls that emanate from the sides of the Reptile Eye sign are all the more significant since they may represent wafting smoke, thereby marking this date as one commemorating a New Fire ceremony that was celebrated during the Epiclassic. The example from the Cerro de la Estrella can be compared to the large calendrical notations that emblazon the frieze of the Pyramid the Feathered Serpents at Xochicalco, where dates that equally commemorate New Fire ceremonies are written with Reptile Eye glyphs, capped by flames and smoke scrolls, framed by volutes and associated with the coefficient 'nine' (see Helmke and Nielsen 2011: 17-20, 2013: 397-401) (Figure 10). What remains to be properly accounted for is the disjunction in the numerical coefficients since we would expect New Fire ceremonies to be celebrated on precisely the same date, not dates with fluctuating coefficients.<sup>6</sup> Nevertheless, it remains a possibility that the numeral associated with the Reptile Eye dates indicate not so much the coefficient of a particular named year, but the ordinal placement of a given New Fire ceremony within a longer sequence of commemorations. Additional support for this is an Aztec sculpture that copies an Epiclassic prototype, which bears the date 'two reed', but below it carries the coefficient 'eight' in the style and format that is typical of the Epiclassic (Broda de Casas,

<sup>6</sup> Assuming that the text at the Cerro de la Estrella records an event that transpired in the year 'six reed', then the smallest temporal interval between this date and that recorded by 'ten rabbit' is nine years.



**Figure 10.** Calendrical notation that prominently emblazons the sides of the Pyramid of the Feathered Serpent at Xochicalco. The glyphs record the date ‘nine reed’ and is topped by prominent fire scrolls and billowing smoke (photograph by Christophe Helmke).

1969: 28-29; Pasztory 1983: 111; Helmke and Nielsen in prep.). Alfonso Caso (1967: 15) interpreted this as a sculpture commemorating the eighth New Fire ceremony since a near-mythic first ceremony celebrated around AD 1091. Similarly, a carved boulder has been found at Xochicalco, bearing the date ‘one rabbit’ is paired off with the date ‘two snake’ (Figure 11). Here again, we can see that the date involving ‘rabbit’ provides the name of a given year, since it exhibits the small looped cord. Above this pairing of glyphs is a *maamalwaastli*, the drilling pin erected in the middle of the board, a series of pointed flames radiating outwards. What is revealing here is the presence of the numeral ‘one’ besides the *maamalwaastli* indicating that the ancient inhabitants of Xochicalco considered this boulder to commemorate the first New Fire ceremony in the year ‘one rabbit’, and quite possibly the founding of the site in the seventh century (Saéñz 1967; see also Lebeuf 1995: 228-231; Elson and Smith 2001: 169; Trejo 2002: 123). The Xochicalco boulder thereby provides some of the earliest concrete



**Figure 11.** The boulder from Xochicalco that commemorates a foundational New Fire ceremony on the day ‘two snake’ in the year ‘one rabbit’. Note the numeral ‘one’ besides the flames emitted by the *maamalwaastli* above the calendrical notation. a) Photograph of the boulder as it appears today (photograph by Christophe Helmke) and b) the boulder *in situ* as found within a *milpa*, its engravings emphasized by chalk markings (after Sáenz 1967: Foto 2).

evidence that the New Fire ceremonies were counted, but also that these were not always celebrated at precisely the same point, nor immutably in years named ‘two reed’. In fact, the codical sources reveal that New Fire ceremonies were celebrated on different dates, and that weighty events could affect the dating. Thus, in the Codex Telleriano-Remensis we can see that New Fire ceremonies were celebrated in the year ‘one rabbit’ (1246), ‘two reed’ (1403), ‘two reed’ (1455), ‘eight reed’ (1487) and ‘two reed’ (1507) (see Quiñones Keber 1995). It is probably far from coincidental that the first New Fire ceremony recorded in the Codex Telleriano-Remensis is recorded on a page that names the mythic Coatepec (fol. 27v). In addition, research by Rafael Tena focusing on ethnohistoric sources, indicates that New Fire ceremonies were celebrated in years named ‘one rabbit’ until the end of the 13<sup>th</sup> century, at which juncture the Aztec shifted the date to ‘two reed’ from 1351 onwards (Tena 1987: 98; Elson and Smith 2001: 169). Returning to the case at the Cerro de la Estrella one is thus left to conclude that the text may well record a New Fire ceremony conforming to yet another pattern of dates or that these shifted as much as the Postclassic examples and that there was in fact no fixed date, apart from a preference for dates named ‘rabbit’ or ‘reed’ (Figure 6b).

Of particular interest is the small circular glyph above that has clearly been appended to the text at a later date, as is made evident by its more careless execution and its orientation, which is at odds with the earlier text. Although it is highly stylised, based on other examples it seems clear enough that the scroll is an abbreviated and almost cursive form of the Reptile Eye, here coupled with the coefficient ‘ten’ and small strokes at the top possibly denote flames and as such yet another record of a New Fire ceremony. If the numerals associated with the Reptile Eye dates record the ordinal sequence of New Fire ceremonies then the dates recorded on this monument may be as many as two centuries apart. Alternatively, these demonstrate the importance of years named after the 13<sup>th</sup> day as propitious to the celebration of New Fire ceremonies, irrespective of their coefficients. Close inspection of the superior portion of the basalt block indicates that attempts were made to carve the date ‘ten reed’ in precisely the same size, form and style, but for unknown reasons this effort was aborted and the date was instead added to the front, as an amendment to the text of the existing petroglyphic panel.

Conjointly, the sequentiality of the petroglyphs associated with C-069 is truly fascinating, starting with the Early Classic panel PT-12 and followed by the Epiclassic panel of PT-11 and ending with the small calendrical notation that probably dates to the latter facet of the Epiclassic. Together these may represent as many as four centuries of intermittent use, and although periodic and irregular, this small cave stood witness to the commemoration of ritual actions that the petroglyphs record. Whether these rituals were all celebrated at the mouth of the cave is unknown, but based on context and association alone it is undeniable that there is a close and intimate relation between this cave and New Fire ceremonies. This is all the more surprising considering the cave’s small size and its location, at the south-western foot of the Cerro de la Estrella and unrelated to the summit that was deemed to be the hallowed location for New Fire ceremonies in the Postclassic. Nevertheless, considering the presence of the Early Classic temple platform built in distinctive *talud-tablero* architecture, on the northern shoulder of the Cerro de la Estrella, we can see that the preferred location for rituals in general, and the celebration of New Fire ceremonies in particular, shifted across the landscape with time. What was important was that these ceremonies were conducted somewhere on the Cerro de la Estrella in the midst of its sacred geography. The petroglyphs associated with C-069 are thus early examples, but are part and parcel of the greater central Mexican tradition of formal and regal rock art that would come to be a hallmark of Aztec sculpture in the Postclassic, commemorating as they do the deeds of their rulers. Interesting in this regard, is the cliff sculpture of Chalpultepec depicting Moctezuma Xocoyotzin that also commemorates the New Fire ceremony of 1507 (Krickeberg 1969; Olivier and López Luján 2010: 81, Figs. 25-26; Pasztory 1983: 124-134; Rivas Castro 2005: 220-225).

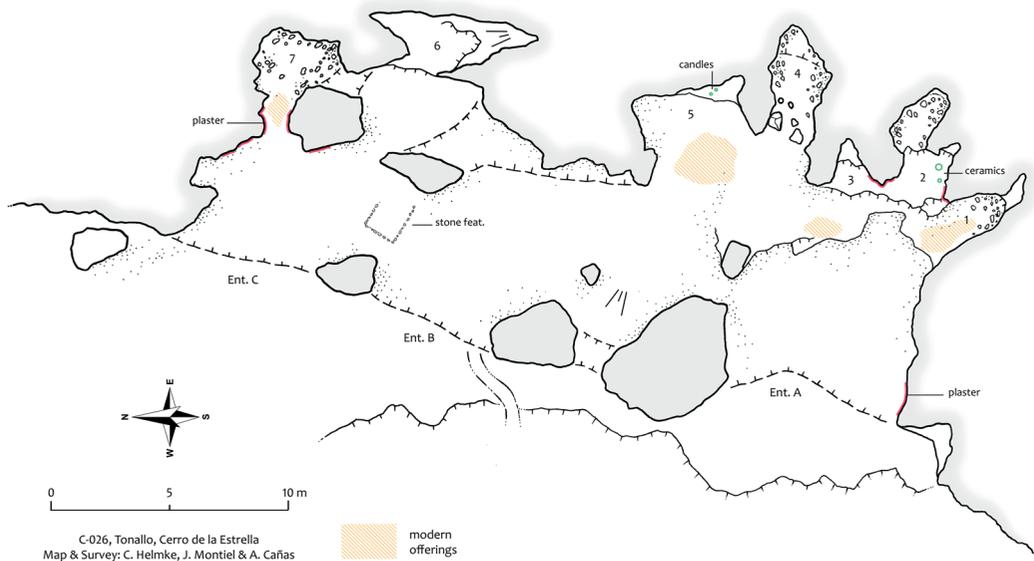
Sadly, the basalt block at Tepetzingo has been the target of recent vandalism and much as the petroglyphs of C-069 attracted early pilgrims to the site, so too are modern populations recording

their presence. On the front face of the petroglyphic panel PT-11 a sequence of letters, that are only partially legible (Figure 10a), have been incised with a sharp and pointed implement, undoubtedly a knife (see also Paz Avedaño 2014). Along the top of the block another vandal has written a large and clear sequence of letters: T-A-R-Z-A-N. What could motivate such an action will remain unknown, but may somehow serve as a moniker or metonym of the person behind the graffiti. As such it is clear is that this important group of petroglyphs are threatened by continued urbanisation and the spread of squatters that are illicitly overtaking part of the zone.

We now turn to another cave that is extremely telling for its place in the rituals, mythology and sacred landscape of the Cerro de la Estrella.

### LA ENCALICHADA (C-026)

The cave known as La Encalichada<sup>7</sup> (altitude: 2423 m AMSL) is part of the Tonallo Group that circle the flank of the hillock, or small peak, immediately to the south of the Postclassic temple. In all there are 11 caves in the area, the largest of which is C-026, which is also one of the largest for the whole of the Cerro de la Estrella (Montero García 2002: 197). C-026 is located some 215 m south of the Aztec temple and measures approximately 33 m long (N-S), as much as 17 m deep (E-W) and its largest entrance is as much as 3,4 m high (Figure 12). There are three major entrances to the site, designated alphabetically from the largest to the smallest, from south to north. C-026 has several



**Figure 12.** Plan of La Encalichada cave (C-026). Note the distribution of modern ritual offerings as well as the traces of plastered wall surfaces (plan and survey by Christophe Helmke, José Montiel and Alejandro Cañas).

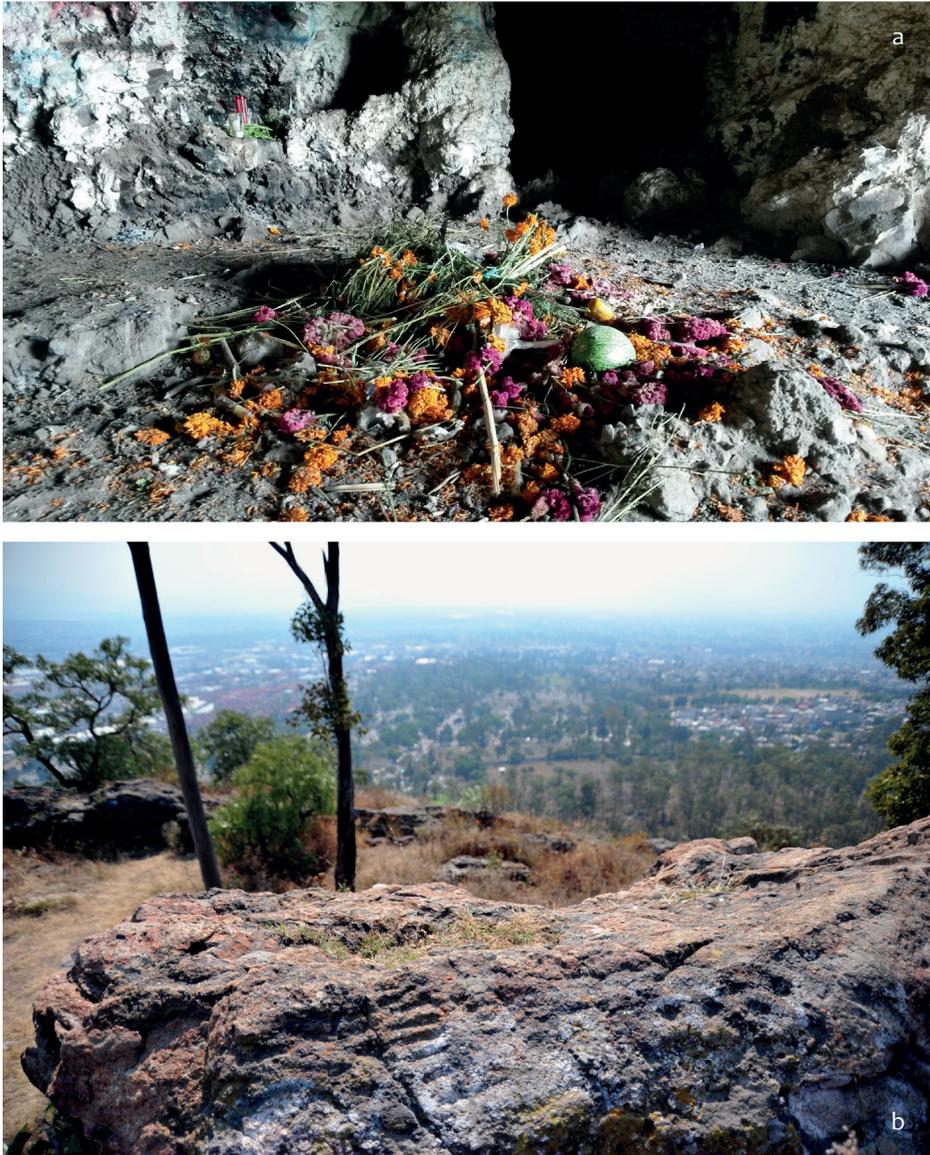
<sup>7</sup> An alternate and provisional fieldname by which this cave was known is la Cueva Encalada (Montero García 2013: 26).

noteworthy features, including its orientation, overlooking the lacustrine landscape of Xochimilco. Seasonally a small spring, or better said a source of water from seepage, has been observed in the deeper portions of the cave. Archaeologically, the remains of ancient plastered surfaces are visible in parts, especially on the walls at the northern and southern ends of the cave. Most significant of all is the fact that the cave is human-made, being entirely carved out of the hill, by extracting the cobble-sized conglomerate of volcanic tuff. Its size, with relatively high ceilings and limited depth, means that most areas are illuminated by daylight, with the dark zone limited to only small recesses and niches. These niches or lobes are rather distinct since these were deliberately quarried and some even exhibit clear quadrangular cross-sections. No spill heaps are visible in the area and it therefore seems that the materials extracted were put to some alternate use, perhaps as core materials for architecture or tempering agents in ceramic industry. If the cave once exhibited rock art it has been concealed by many layers of modern graffiti and lime wash. Nevertheless, not far from the cave, at the summit of the hillock, there are several examples of architectural “models”, wherein natural surfaces resembling diminutive temple structures are embellished by the addition of small stairs, as if to create small shrines where rituals could be conducted (Wallrath 2002: 206-208; Montero García 2002: 185) (Figure 13b). Simple petroglyphic human faces have been found in association with these models. These architectural “models” are usually associated with Teotihuacan culture of the Early Classic, although examples dating to the Epiclassic are also known (Manzanilla and Ortiz 1991; Smith and Hirth 2000: 45-48; Fonseca Ibarra 2014). It is possible that the same dating applies to the examples from the Cerro de la Estrella, but this has not yet been corroborated by archaeological finds from the nearby caves.

La Encalichada continues to be utilised by the local community to this day and its name stems from the fact that its walls are extensively and regularly whitewashed, apparently as a measure to counteract the extensive graffiti that affects most of its wall surfaces. Oddly, it is also a site that is regularly cleaned out, possibly as part of the same whitewashing efforts or at other intervals. Unfortunately, this has had disastrous effects on the archaeological materials that the cave once contained. The site also exhibits much evidence of modern ritual usage, as is attested by the many discrete concentrations of *cempasúchitl* flowers, also known as Mexican marigold (*Tagetes erecta*), fruits (including watermelons and oranges) and candles scattered throughout the penumbral portions of the site (Figure 13a). Nevertheless, even these deposits do not remain for long since preparations for rituals entail sweeping aside the remains of previous ceremonial activities. In addition, some of the rocky outcrops appear to be used as altars since votive candles are placed on these and ephemeral features are elaborated on the flooring using pebbles, some in circular, others in quadrangular configurations, apparently to delineate sacral areas that a patient or neophyte is meant to occupy.

What is really striking about this cave is its configuration since the number of niches and small chambers that have been carved out of the side of the hill amount to seven in all. Whereas this may be fortuitous, the size of this cave, its proximity to the Postclassic temple and its continued ritual function all suggest that this feature is far from coincidental. The identification of the seven niches has also been made independently in 2008, by members of the *Proyecto Huizachetepetl* (Jorge Aguilar, pers. comm. 2014), an important group of volunteers who conduct eco-touristic tours and manage community projects in the area. The configuration of the cave is all the more remarkable when we take into consideration that the niches and chambers extend out from a larger central opening, thereby recalling the form of the mythic cave known as Chicomoztoc, literally ‘seven-caves-place’, which was of paramount importance to the cultures of Central Mexico. As such, we thereby interpret C-026 as an artificial and human-made emulation of this primordial place, within Colhuacan, the mountain of the ancestors.

In this respect, C-026 closely compares to the archaeological site at Acatzingo Viejo, in Puebla, which is a grouping of seven artificial caves that have also been identified as replications of Chicomoztoc,



**Figure 13.** Features of the Tonallo area: a) A modern ritual deposit within Chamber 5 of La Encalichada cave. The deposit consists of flowers, reeds, and fruit. Note the candles set on the shelf in the background, serving as an altar. b) A grouping of petroglyphs on the summit of the hillock above La Encalichada, including an architectural model of a temple (to the left) and two schematic faces (to the right) (photographs by Christophe Helmke).

by Manuel Aguilar-Moreno and his colleagues (Aguilar et al. 2005). Telling are the examples of the tunnels below the Pyramid of the Sun and the Feathered Serpent at Teotihuacan, since these terminate in quatrefoil chambers, and exhibit two lateral niches near the middle of the tunnel, also suggesting

that these were designed to represent seven chambers in all and as such constitute the earliest artificial emulations of Chicomoztoc known for Mesoamerica (Heyden 1973; Brady 2000; Gómez Chávez 2012). The importance of Chicomoztoc is made explicit in the ethnohistoric manuscripts that were produced in the decades before and after the Spanish conquest, the most salient examples of which are presented below.

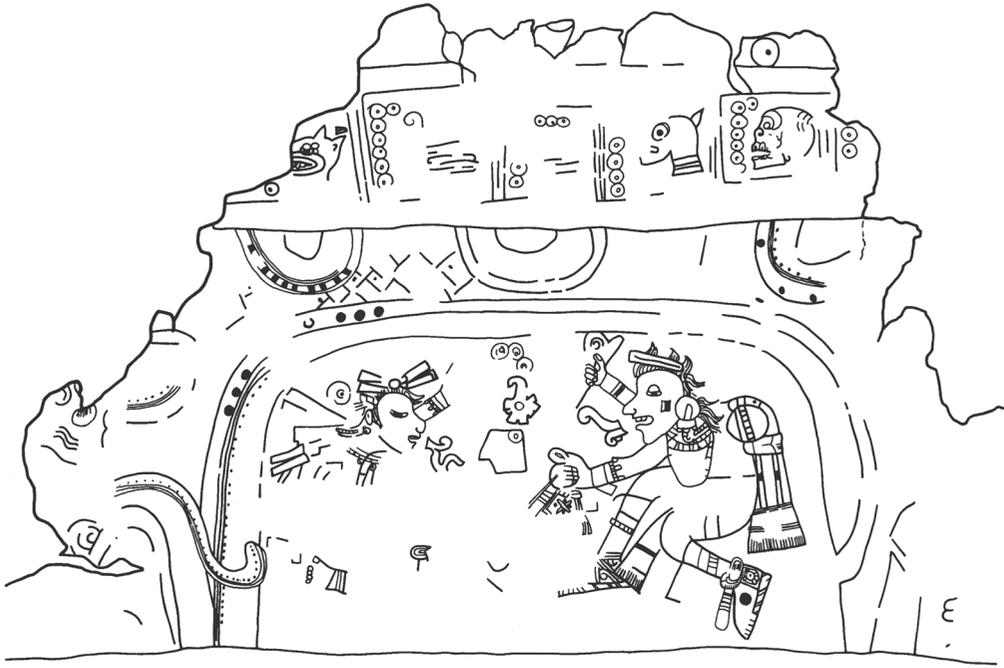
## ETHNOHISTORIC SOURCES

The ethnohistoric manuscripts provide us with rich and detailed sources pertaining to Aztec mythology, founding myths and their rituals. Here we will examine the relationship between one set of myths and how these relate to the New Fire ritual. In particular we will explore the place of Chicomoztoc, the legendary ‘seven-caves-place’, within written and figurative sources, a cave that in many ways was conceived of as the womb of human creation (see Heyden 1991: 501, 510-512). These sources also reveal that a fire was drilled upon the egress of people from the cave, and as such this act serves as the mythological precedent for all subsequent fires. The periodic drilling of the New Fire thereby all amount to replications and instantiations of the First Fire that was ignited at the moment of human creation.

Among the written sources, the account provided in the *Monarquía indiana* by fray Juan de Torquemada (1969: II: 76-77) relates that a lithic blade or knife plummeted from the heavens and impacted the earth, thereby forming Chicomoztoc. This blade is said to have been born of the celestial deity Citlalicue (‘star-garment’), who in addition to night and darkness, created the stars, and her mate, Citlalatónac (‘star-light’), the Milky Way. Once formed, this cavernous place gave rise to the 1 600 deities of the Aztec pantheon (Torquemada 1969: II: 77). It was also within that cave that the deity Xolotl, and/or his brother Quetzalcoatl ventured to extract ashes of the remains of the earliest creations from which to fashion humans (Taube 1993: 37-39). In some variants of the myth the primordial pair of ancestors emerged within the cave, a scene that may be represented on the Postclassic Calendrical Temple at Tlatelolco (Guilliem Arroyo 1998) (Figure 14) as well as in the Tlotzin and Quinatzin *mapas* (Boone 2000: 186-194) and the Codex Xolotl (Dibble 1980). The motif of the ancestral pair within a cave is in fact widespread in Mesoamerica and is found in a variety of cultures in Pre-Columbian times, as has been demonstrated by Jesper Nielsen and James Brady (2007).

In other variants of the myth, each of the principal tribes or ethnicities emerged fully-formed from the cave, their cultural and linguistic differences defined from the onset of human creation (Durán 1964: 9-13). Here, the sources do not always agree and different groups are mentioned as relevant, according to time and place, presumably in order to better project the influence and prestige of various groups into the deep mythic past. In this regard the number seven is significant since from each chamber, or niche, of the greater cave stemmed a particular ethnic group. One of the best figurative sources in this regard is the *Historia Tolteca-Chichimeca*, dated to between 1550 and 1570, which depicts Chicomoztoc as a large seven-chambered cave, within an arid landscape dotted by wild grasses, and a variety of cacti (fol. 12). In addition to the footprints that emanate from the cave, indicating the exit of the earliest humans from their place of origin, the cave is found within a mountain that is topped by a curved peak. Significantly, this marks the mountain that contains Chicomoztoc as a Colhuacan or ‘place of ancestors’.

This motif also recalls the prominent foundation myth of the Inka who recognise the cave of *Tambo Toco* (‘house of windows’) in the region of *Pacari Tanbo* (‘dawn/birth house’) as their place of origin. In the Inka myth there are three windows as is confirmed by a particularly telling representation of Tambo Toco in the manuscript of Felipe Guaman Poma de Ayala, entitled the *Nueva Corónica y Buen Gobierno*, housed in the Danish Royal Library. The Andean myths go on to relate that the Inka



**Figure 14.** The creator couple within the primordial cave. Mural adorning the Calendar Temple at Tlatelolco (drawing by Heather Hurst, after Boone 2007: Fig. 6).

emerged from the central window, whereas their allies stem from the lateral windows, the ancestors of each group emerging as paired couples (Urton 1999: 45-47). Among the cultures of the American Southwest, they recognize their origins from the Underworld via a hole that is known as *sipaapu*, ‘the navel’ (Bierhorst 1985: 77-86; Geertz 2010). Whereas one particular geographic locality is recognised as the actual Sipapu and is held in great esteem, there are many architectural emulations of this important cosmogonic feature, as a small cavity within the underground ritual chambers known as *kiva* of the Puebloan cultures. It also bears remembering that the Aztec are linguistically a part of the Yuto-Nawan language family and as such have brought a series of practices and beliefs with them to Mesoamerica, owing to affinities with the cultures of the American Southwest (e.g. Hill 2001; Miller 1983). The commonality between these Amerindian myths suggest that these are ancient ones that can be traced back to great antiquity and that the number of chambers and windows are retrospective amendments made within particular cultural contexts to justify specific ethnic and socio-political realities.

### Historia Tolteca-Chichimeca

Returning to the Aztec case, we find an additional example from the *Historia Tolteca-Chichimeca* (fol. 16r), that depicts Chicomoztoc, much as before, as a large seven-chambered cave, within an arid landscape (Figure 15). Here the walls of Chicomoztoc are marked by wavy yellowish lines along a flesh-coloured band, an iconographic convention that represents fatty flesh, and which can be traced back to the Postclassic (Jesper Nielsen, pers. comm. 2014). A notable example includes the famed Coyolxauhqui sculpture at the foot of the Templo Mayor, where each of her severed limbs are marked



**Figure 15.** The emergence of the seven tribes from Chicomoztoc, within the curved mountain of Colhuacan, and the drilling of the First Fire on its summit – *Historia Tolteca-Chichimeca*, Fol. 16r (after Kirchhoff et al. 1976: 56).

by the same wavy lines, revealing the soft fleshy tissue. Thus, there can be no doubt that cultures of the central Mexican Highlands conceived of Chicomoztoc as a cavernous and living womb. As has been recognised by several scholars, the reference to caves as places of emergence certainly find their inspiration from human parturition, the earth symbolically assuming the identity of the mother and the cave as the womb. It is in this capacity that cave rituals inherently constitute *regressus ad uterum* as initially observed by Mircea Eliada (1969: 114; see also Heyden 1991; Brady 1988; Montero García 2002: 188). Furthermore, the number of caves attributed to Chicomoztoc is far from coincidental since it undoubtedly refers to human anatomy and the seven orifices of the human body (López Austin 1984: 173).

In the *Historia Tolteca-Chichimeca*, each of the chambers of the cave is populated by brooding ancestors of the seven tribes, identified by short glyphic captions. Thus, among others we see the Acolhuaque, Colhuaque and Mexica, each a tribe that is credited with founding a major city-state in Central Mexico (Durán 1964: 9-13; Kirchhoff et al. 1976). Again the mountain that houses Chicomoztoc is clearly marked as the ancestral Colhuacan. Most significant of all is the small figure at the summit, who is actively drilling the First Fire, the first bursts of smoke billowing forth. Thus, here we can see that there is an intimate relation between the myth of emergence and the drilling of what we call the First Fire.

The need to warm newborn infants is a cross-cultural concern, which undoubtedly serves as the reasoning and impetus for the First Fire ceremonies recorded in the ethnohistoric sources, and in turn provides the mythological precedent for all subsequent New Fire ceremonies as the fire that was drilled at the mouth of Chicomoztoc upon the emergence of humanity. That the fire-drilling figure wears the skin of a coyote underscores the wild and almost feral nature of the ancestors, which by the Aztecs own sources were regarded as Chichimec, which is to say as uncultured hunter-gatherers.

## Mapa de Cuauhtinchan Nr. 2

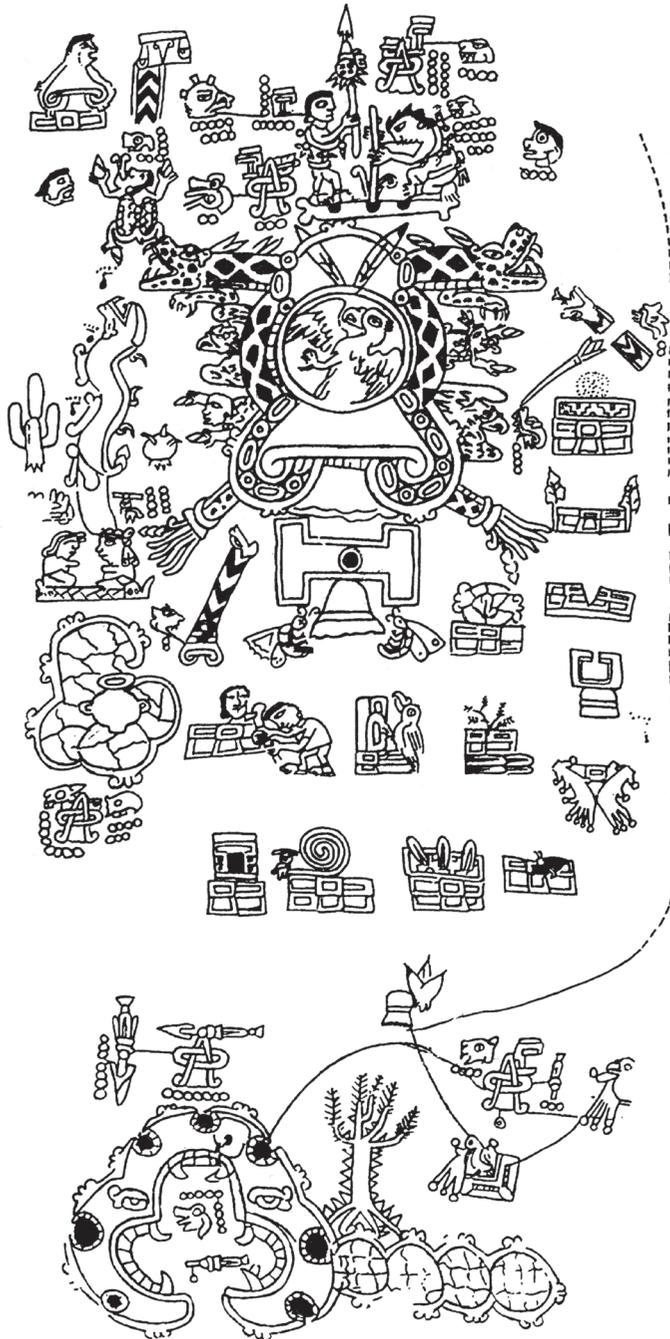
A very similar pattern is found in the *Mapa de Cuauhtinchan Nr. 2*, which much like the *Historia Tolteca-Chichimeca* dates to the 16<sup>th</sup> century and can also be attributed to the settlement of Cuauhtinchan in Puebla (Carrasco and Sessions 2007; Heyden 1991: 501). Unlike the latter, however, the *Mapa de Cuauhtinchan* is not a text written in book format on European paper, but a cartographic history of the peoples of Cuauhtinchan, tracing their history from their mythic origins until more recent history, embroiling their capital against neighbouring city-states. At the start of the narrative we find another clear depiction of Chicomoztoc and the ancestral figures are seen streaming from the cave, armed with bows and barbed arrows and bearing what seem to be serpentine staffs (Figure 16). In the scene immediately below the mouth of the cave we can see two Chichimec, wearing animal skins, using what seems to be an oversized arrow to drill a fire on the back of one of these serpentine staffs. The two figures are seated within a stepped motif that is embellished by thirteen arrows, a number that is of calendrical significance. The stepped form is undoubtedly a stylized representation of a mountain (see Helmke and Nielsen 2011: 40-41, 2014), which suggests that they are preparing the First Fire at the entrance of a cave, within a mountain.

## Lienzo de Tlapiltepec

In yet another manuscript of the 16<sup>th</sup> century, the *Lienzo de Tlapiltepec*, which can be attributed to Coixtlahuaca in the Mixteca Alta, we can see similar archetypes (Figure 17). The majority of this manuscript relates the founding of Coixtlahuaca and associated settlements as well as the deeds of the 13<sup>th</sup> century rulers known as One Wind and Four Jaguar. The initial portion of the *lienzo* provides the dynastic history of the rulers of Yucucuy and Miltepec and traces their pedigree to the initial



**Figure 16.** The emergence of the early tribes as Chichimec, dressed in animals skins and bearing bows and arrows, from Chicomoztoc, leading up to the drilling of the First Fire – *Mapa de Quauhtinchan No. 2, Section A* (after Carrasco and Sessions 2007).

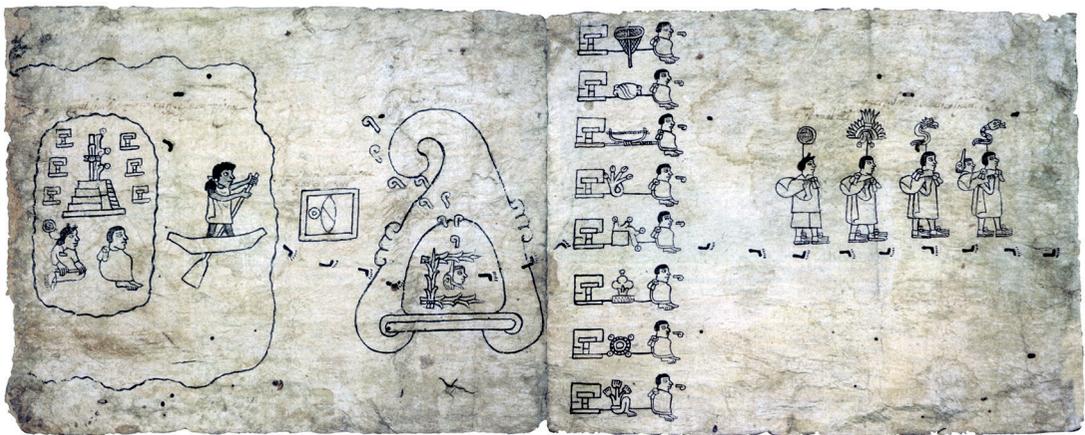


**Figure 17.** A abridged rendition of the initial portion of the origin and foundation story, starting with the emergence from Chicomoztoc (at the bottom) and culminating with the drilling of the First Fire (at the top) as a foundational event – *Lienzo de Tlapiltepec* (after Boone 2000: Fig. 91).

royal couple established at a place named Comoztoc (Boone 2000: 130). These ancestors are tied to the emergence myth of Chicomoztoc, which is here represented as a personified mountain sign that is perforated along its perimeter by seven small apertures. Within the gaping maw framed by sharp hooked teeth, are two glyphic compounds, one reading ‘nine wind’ the other ‘one reed’. Whereas the first may refer to Quetzalcoatl as one of the agents of human creation – recalling the episode wherein he is said to have retrieved ashes of the remains of the previous creation – the latter remains unclear, but may refer to the decidedly arrow-like staff that is used as a drilling pin. The culmination of the mythical portion of the *lienzo* that precedes the extensive dynastic list, is a foundation event, which was celebrated in conjunction with the drilling of a New Fire, in the year ‘three house’. In keeping with the Mixtec calendar, the New Fire ritual here is celebrated not in the year ‘two reed’, but is shunted to the date ‘three house’ (see Broda de Casas 1969: 46-52). Here the New Fire is being drilled by two priestly officiates, including one that lifts a spear aloft and another, who is actually drilling the fire (see Boone 2000: 135-136). It is the integral link between the primordial emergence of humans from Chicomoztoc and the culmination of proper order, by the drilling of the First Fire that epitomises the founding myth. As a result, the Lienzo de Tlapiltepec continues the same genre in the Mixtec area, which otherwise predominates in the central Mexican Highlands among the Aztec. The motif of Chicomoztoc as the place of emergence associated to the First Fire also appears to a certain degree in the Selden Roll, another manuscript of the Coixtlahuaca area, which dates to the first half of the 16<sup>th</sup> century (Burland 1955; Heyden 1991: 501).

### Codex Boturini

Among the myths pertaining to Chicomoztoc are the migrations stories of the Aztec tribes, which relate their journey through the wilderness until they reached the promised land. The *Codex Boturini* (also known as the *Tira de la Peregrinación*) also dates to the 16<sup>th</sup> century and provides a very detailed account of this narrative and relates the departure of the Aztec tribes from their mythic home at Aztlan. On the date ‘one flint’ and at the behest of the deity Huitzilopochtli, the patron deity of the Aztec, they abandoned their homeland and began their venture (Figure 18). The migration is represented as four *teomamake* or ‘god-bearers’, who bear bundles, the first carrying a child-like Huitzilopochtli on



**Figure 18.** The departure of the eight tribes from Aztlan at the behest of Huitzilopochtli, represented as a small figure in a cave within the curved mountain, Colhuacan – *Codex Boturini*, p. 1-2 (after Johansson K. 2007: Lám. I-II).

his back. The *teomamake* were the senior priests in charge of bearing the effigy of Huitzilopochtli and tending to his cult, interpreting his wishes via auguries. A point of discrepancy of the version related in the Boturini is that there were eight tribes and not seven and that Chicomoztoc is wholly absent, perhaps due to the incongruent numbers of tribes. What is interesting is that along the shores of Aztlan is a large mountain, with a curved summit, marking it as Colhuacan, and in the cave within is a diminutive figure, clearly Huitzilopochtli, based on his hummingbird headdress. Here Huitzilopochtli is framed within an arbour of leaves and speaks his command to the Aztec tribes. Thus, here we can see that the cave within Colhuacan is a place of origin of Huitzilopochtli and his original abode. Whereas it is not explicit, one is left to conclude that the cave is none other than Chicomoztoc.

In the absence of a clear seven-chambered Chicomoztoc in the *Boturini*, the first New Fire ceremony is named in connection with another supernatural location, namely Coatepec. This is a point of congruence with the Codex Telleriano-Remensis, where the First Fire was also cited in connection with Coatepec. This suggests that we are looking at two alternate traditions, or alternatively a type of conflation between Colhuacan and Coatepec, one being emphasized over the other, depending on the particular records.

### Codex Azcatitlan

Clearly a later copy of the Boturini is the Codex Azcatitlan, which can be dated to the latter third of the 16<sup>th</sup> century, considering the style of the European lettering appearing in the glosses (*Codex Azcatitlan* 1995: 16-17). In this manuscript, the migration saga is depicted, much as in the Boturini, as a grouping of *teomamake* and the heads of tribes departing their mythic homeland on the date 'one flint', with a date written in European numerals suggesting that this event took place in AD 1168 (Figure 19a). Here they are turning their back on the large curved hill, marked as <Colhuacan> in the associated caption in Latin lettering. At its base, is a dark aperture, representing a cave, and within is Huitzilopochtli in a decidedly avian form. The deity effigy, borne this time by the last of the *teomamake* exhibits a scrolled proboscis, suggesting that Huitzilopochtli also exhibits butterfly traits, in addition to his typical and diagnostic hummingbird features. The blending of hummingbirds and butterflies and their association with warriors, their orders and patron deities is something that harks back to Early Classic Teotihuacan, where these features were first developed (see Headrick 2003; Taube 1992; Nielsen, this volume). Later in the narrative the tribes arrive to a mountainous landscape dominated by a river, where a battle seems to have transpired, as marked by a bow and arrow, below the head of a captive (Figure 19b). In addition, several bodies and other objects are seen floating down a stream. Based on context and juxtaposition it seems that it is Huitzilopochtli who has won the battle, here represented as an anthropomorphic figure in an avian suit. This type of battle scene recalls the mythic conflict embroiling Huitzilopochtli and his siblings, whom he had indiscriminately slain at Coatepec. What is most remarkable, however, is that the battle represented in the Codex Azcatitlan does not take place at Coatepec, but at Chicomoztoc, depicted as a personified mountain in the form of a sleepy lioness. The protuberances emerging from its body provide six small spaces or caves and its mouth must have counted as the seventh, since the gloss besides this mountain clearly reads <Chicomostoc>. At the shoulder of this mountain Huitzilopochtli is manipulating a *maamalwaastli*, clearly in the process of drilling the First Fire. Whereas the date of this New Fire is unclear, the Codex Azcatitlan suggests that it transpired on the year 'four reed' or AD 1171. Thus, once more we find a close concurrence between the caves of emergence and fire-drilling ceremonies, here held as a celebration over vanquished foes. In addition, we can see that the date is at odds with the allegedly canonical 'two reed', providing yet another example of these disjunctions or fluidities. Interestingly, we see the blending of several myths, or at least a variant of the myth of Huitzilopochtli's miraculous birth at Coatepec as related by Sahagún (1978: 1-5) and the *Historia de los mexicanos por sus pinturas* (Garibay 1965).



**Figure 19.** a) The departure of the tribes from their mythic homeland, turning their back on Colhuacan. b) Huitzilopochtli drilling the First Fire at Chicomoztoc following a decisive battle – *Codex Azcatitlan*, Lám. III & V (after *Codex Azcatitlan* 1995).

### Codex Tovar & Codex Durán

Other representations of Chicomoztoc are somewhat later and thereby represent this place of origin along a different format that is more influenced by European canons than the manuscripts we have just reviewed. One such salient example is *Codex Tovar* (also known as the *Codex Ramírez*), a manuscript attributed to the Mexican Jesuit Juan de Tovar and dated to between 1583 and 1587. This manuscript provides detailed descriptions of Aztec rites and ceremonies and is lavishly illustrated, one of which depicts Chicomoztoc, under the caption “*Cuevas delos siete linajes*”, as a series of seven caves, variously populated by couples, groups of three or four ancestral figures (Figure 20a). Clearly this is a copy of an original illustration included in Diego Durán’s *Historia de las Indias de Nueva España y islas de Tierra Firme*, which was completed by 1581, and also included a rendition of Chicomoztoc as a series of seven caves (Figure 20b), the amount of caves in each row and the number of individuals in each cave agreeing with the Tovar manuscript. The earlier version in the work of Durán, however, shows the cave openings embellished with trilobe designs that echo the stone markings of earlier genuine Aztec examples.

### Codex Vaticanus 3738

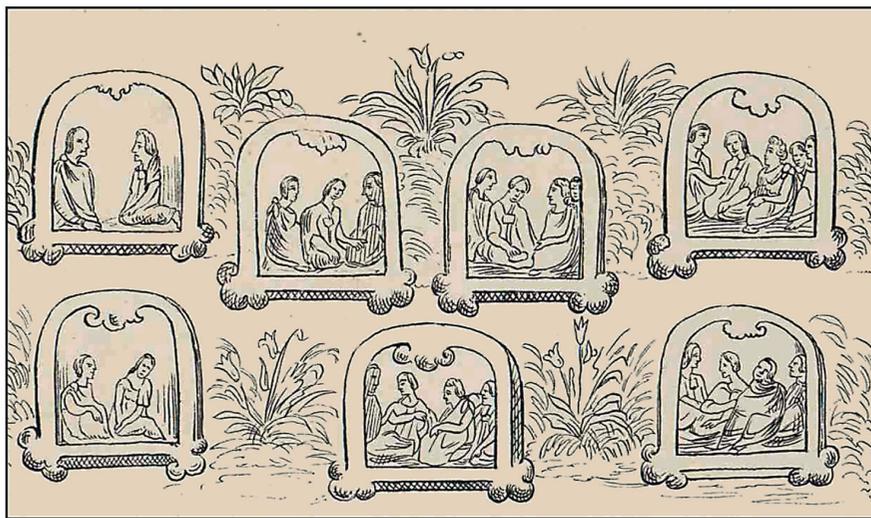
A similar linear arrangements of separate caves, rather than chambers of a single large cave, is also found in the *Codex Vaticanus 3738* (*Codex Ríos*), dated to the latter half of the 16<sup>th</sup> century (Figure 21). As with other representations, the ancestral leaders of each of the tribes are dressed as Chichimec, bearing bows and arrows, captions in Latin letters naming each of the ethnic and linguistic groups. Most significant of all is the presence of a row of calendrical glyphs along the base, including the date ‘two reed’ that is appropriately associated with a *maamalwaastli*. The European gloss to this First Fire ritual suggests an anchor date of 1194 (instead of the expected 1195, using alternate correlations; see Caso 1967; Broda de Casas 1969) again making the relation between Chicomoztoc and the First Fire ritual evident.

## FINAL THOUGHTS

In this paper we have presented archaeological evidence for the continuity of human occupation and utilisation of the Cerro de la Estrella, tracing back from the Late Postclassic to at least the Early Classic. During this time it is clear that the Cerro de la Estrella was a focal point of ritual utilisation and we would argue that the New Fire ceremonies of the Late Postclassic – for which this place is best known – are simply late manifestations of a steady and uninterrupted series of ritual actions focused on the drilling of fires. In some measure these practices subsist to the present day in the bonfire of the nocturnal Easter Vigil mass, which may help to explain the importance of the Cerro de la Estrella in the Catholic celebrations seen there today (Helmke and Montero García 2016).

In part our work has revealed some unprecedented findings, including the variability of the timing of New Fire ceremonies. Using the ethnohistoric sources compiled shortly after the Spanish conquest, one is left with the impression that the New Fire ceremony was rigidly celebrated on precisely the same date and at exactly the same intervals, for time immemorial. Yet, a careful scrutiny of the ethnohistoric sources, coupled with the epigraphic data of the Epiclassic period, some seven centuries prior, both that found on the Cerro de la Estrella and that from other contemporaneous sites – such as Xochicalco and Cacaxtla – make it clear that the timing of New Fire ceremonies fluctuated and was much more changeable than most of the sources of the 16<sup>th</sup> century lead us to believe.

Examining the ethnohistoric sources we have been able to suggest that the fire that was first drilled at the mouth of Chicomoztoc, upon the emergence of humanity, constitutes a primordial act of



**Figure 20.** Representations of Chicomoztoc as a series of seven separate caves, populated by ancestral couples and small groups: a) with caves outlined by irregular stones – *Codex Tovar*, p. 58 (*Codex Tovar* 2012); b) with caves framed by openings marked by trilobe designs – *Historia de las Indias de Nueva España e islas de Tierra Firme* (Duran 1880: Lám. 1).



creation and one that served as the mythical precedent for all subsequent fire-drilling rituals. As such the New Fire ceremonies are periodic instantiations of the First Fire and thereby constitute an “eternal return”, to use the words of Mircea Eliade (1971), which describe the ability to return to mythic time and for mythic events to be made manifest through ritual action. In so doing we have also been able to reveal the intimate relation between caves and New Fire ceremonies, a relation that heretofore had been overlooked or at least under-appreciated in scholarly literature (but see Montero and Brady 1999; Sheseña 2005).

In addition, we have also touched on the existence of two alternate traditions, one in which Coatepec is emphasized whereas the other focuses on Colhuacan as the place where the First Fire was drilled. In narratives that emphasize the ethnic and linguistic diversity of humanity, Colhuacan figures prominently, but in those that feature the travels and trials of the groups that left Aztlán, Coatepec is preeminent. However, we can also see that there is a degree of overlap since the cave within the curved mountain, Colhuacan, is also alleged to be the original abode of Huitzilopochtli. Furthermore, in the *Codex Azcatitlan*, the First Fire drilled by Huitzilopochtli may celebrate the vanquishment of his half-siblings, yet here it is made explicit that this occurred at Chicomoztoc, demonstrating a certain degree of overlap between these two alternate traditions.

In light of the sources at hand we can see that New Fire ceremonies were celebrated in the wilderness, in places that are liminal and untamed, harking back to the time when the earliest humans drilled the First Fire, roaming the lands as Chichimec. It is undoubtedly no coincidence that the rock art that commemorates such New Fires was also recorded on boulders in untamed landscapes. Salient examples include the rock art of Tepetzingo cave on the flanks of Cerro de la Estrella, but also the New Fire boulder from the outskirts of Xochicalco, and the relief carved at the behest of Moctezuma Xocoyotzin amid the cliffs of Chapultepec. Doubtless other examples exist and it is an exciting prospect to document and analyse these as part of future collaborative research.

Finally, we must not forget the context of New Fire ceremonies, within sacred landscapes filled with cosmological potency. Recalling that the Cerro de la Estrella was also known as the hill of Colhuacan, it is therefore of fundamental importance to recall the Encalichada cave with its seven lobes, a human emulation of Chicomoztoc within Colhuacan, thereby precisely duplicating the primordial cave within the sacred mountain. La Encalichada may thus also have been conceived as the original dwelling of Huitzilopochtli, within Colhuacan, the mountain of the ancestors. As such the Cerro de la Estrella was the very centre of the universe, the womb of creation, where humans first appeared on earth. It is therefore difficult to imagine a more fitting place to celebrate New Fire ceremonies, ritual means of materialising the mythic past in the present.

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