



## Research Article

# Afterlife Cycles, Cosmology, and Social Integration: Burial Practices in the Lower Ulúa Valley

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### Abstract

We present a synthesis of treatment of the dead from before 700 B.C. to the fifteenth century A.D. in the lower Ulúa River Valley of northern Honduras. Building on evidence of burial alignments to a prominent mountain first identified for the Classic period, we argue that mortuary rituals served to integrate politically independent communities within a shared cosmological landscape. We identify alignment of burials toward the same mountain beginning in the Middle Formative period. At this time, a cycle of mortuary treatment resulted in bodies of some of the dead being commingled in shared secondary burial sites in caves, significant locations in the cosmological landscape. During the Classic period, secondary mortuary treatment continued, now performed within settlements again united by orientation to a shared cosmological landscape. The addition of solar alignments may be evidence of adoption by some families of Lowland Maya cosmological beliefs. This impression is solidified in Postclassic burial practices that align closely with those of specific Lowland Maya societies. We argue that the afterlife cycles through which the living interacted with the dead, in a tension between individualization and communal belonging, included strategies through which social relations, community histories, and ties among communities were created.

In this paper we argue that the reproduction of specific mortuary practices, in the absence of centralized political control, indicates that broadly shared cosmologies of place were significant forces of social integration in the lower Ulúa Valley from as early as 700 B.C. to the fifteenth century A.D. We rely on a model of cosmology of place developed in previous research on sites dating between A.D. 450 and A.D. 850 (Lopiparo 2003, 2006, 2007). During this period, people in the lower Ulúa Valley oriented interment with respect to specific mountains and seasonal movement of the sun, including sunrise and sunset near the time of solstices. This resulted in alignments of extended burials skewed from cardinal directions but coordinated within a shared cosmology and geography.

Building on this previous work, we reviewed all available burial data from the valley for the Formative through the Late Postclassic periods. We identified an unexpectedly long history for previously described practices. By combining data from our own excavations with those from previously excavated sites, we have identified both long-term continuities and moments of change. Patterns observed in

smaller numbers of burials from different sites become more visible in the resulting valley-wide sample.

In the Middle Formative period (700–200 B.C.), we see participation in a cycle of primary and secondary burial practices balancing commemoration of the person with familial or communal relationships. We have no burial data for the period from 200 B.C. to A.D. 450. In burials dating after A.D. 450, a de-emphasis on the individual person and a shift in the locus of communal participation in commemoration away from the mortuary setting itself take place. Burials continue to be placed in residential spaces, as they were previously. Extended position remains the norm, allowing continued alignment of burials with cosmologically significant directions. We can identify evidence of a cycle of secondary mortuary ceremony after A.D. 450 that is consistent with continued understanding of personhood as partible and relational (Lopiparo and Joyce 2023), established in the Formative period.

In the transition to the Postclassic period, we see greater change. A new emphasis on seated position or “bundle” burial posture breaks with long-established patterns of orientating the bodies of the dead to shared points on the horizon. The new burial position is accompanied by a renewed practice of deposit of objects as part of burial, after centuries when this was not common. Objects included show that residents of the lower Ulúa Valley were

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participants in a regional network of ceremony, connected to sites in Yucatan. The individuality of the buried person was foregrounded by these new burial practices, which persisted until the end of the prehispanic period.

We conclude that throughout this long history, actions taken to commemorate and interact with the dead and to perpetuate social relations through time were one of the main forces integrating the heterarchical network of settlements in the lower Ulúa Valley. These afterlife cycles include the many ways that the inhabitants of the Ulúa Valley engaged in ongoing relationships with the dead, a kind of necrosociality that was essential to social reproduction. They constituted politics by other means, enabling coordination between neighboring communities that shared mortuary practices and beliefs while maintaining autonomy.

### Research Background

The lower Ulúa Valley (Figure 1) is a 2,400 km<sup>2</sup> valley formed by the Ulúa River and its tributaries, the largest of which was what today is the separate Chamelecón River. Research at sites along the Ulúa River from the 1890s through the 1930s documented deeply stratified deposits from the Middle Formative through the Postclassic periods (Gordon 1898b; Popenoe 1934; Strong et al. 1938). Beginning in the 1970s, systematic survey identified over 500 sites and defined the changing geomorphology of the valley over its history (Henderson 1984, 1988; Pope 1985). New ceramic typologies facilitated cross-dating of sites (Beaudry-Corbett et al. 1993), and substantial regional variation was documented (Joyce 1985; Robinson 1989). Recent studies of polychrome ceramics (Joyce 2017a) and figurines (Hendon et al. 2014) used in sites throughout the valley have refined the Classic period chronology and offered new proposals concerning Late Classic social dynamics (Joyce 2023).

Most visible architecture dates to the Classic and Terminal Classic periods (ca. A.D. 550–950). Early exploration at one site with significant architecture, Travesía (Stone 1941), has been complemented by more recent excavations (Joyce 1987) and studies of marble craft production (Luke and Tykot 2007). Research on Cerro Palenque, a second center, demonstrated that it grew to be the largest site in the valley between A.D. 850 and A.D. 1050 (Hendon 2010; Joyce 1991). Currusté, a third center, initially explored in the late 1970s (Hasemann et al. 1978), was the focus of later research documenting households and public ceremonies (Lopiparo 2008, 2009). These projects were complemented by household archaeology in a series of sites with more modest architecture (Hasemann 1979; Joyce 2011; Lopiparo 1994, 2003; Swain 1995).

We build on previous analyses by Jeanne Lopiparo of burials she encountered in sites in the central Ulúa floodplain (Lopiparo 2003). She places burials at these sites, occupied from the middle of the Classic through the Late and Terminal Classic periods (ca. A.D. 550–950), in the context of household production and the intergenerational reproduction of families through the practice of rituals that produced a variety of structured deposits (Lopiparo 2006, 2007,

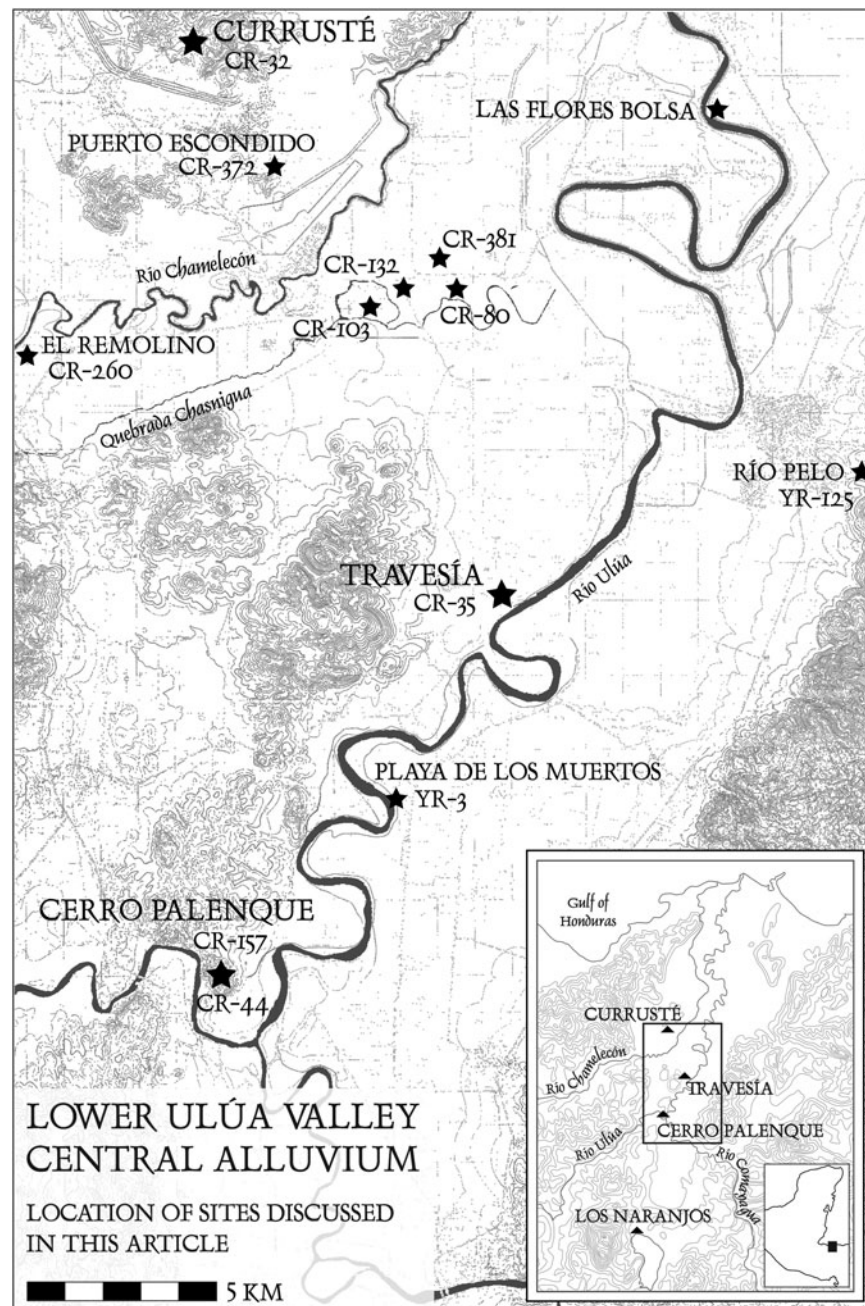
2021). At Currusté, Lopiparo documented contemporary primary and secondary mortuary rituals (Lopiparo 2008, 2009).

We juxtapose Lopiparo's analyses of Classic period mortuary practices with information from Rosemary Joyce's investigation of museum collections and archival sources documenting earlier and later burials encountered in the early twentieth century in sites along the Ulúa River. A group of burials from Playa de los Muertos, occupied from 700 to 200 B.C., provide our earliest basis for understanding mortuary practices (Popenoe 1934). Las Flores Bolsa, a riverbank site excavated in 1936, with a curated museum assemblage analyzed by Joyce, yielded Late Classic and Early Postclassic burials (Joyce 1987; Strong et al. 1938). We integrate information, including determinations of sex and age made by the original excavators, contained in an unpublished burial catalog for Las Flores Bolsa and Playa de los Muertos (Kidder and Strong 1936). Distinctions in treatment by age are consistent with other evidence for the importance of childhood in a life cycle marked by ritual from the Formative period to the Classic period (Joyce 1999, 2003, 2011; Lopiparo 2006). They underline our conclusion that mortuary practices were a significant way that personhood was produced and social relations cemented in this region.

### Burial Alignments and Cosmology

A significant aspect of our analysis of burials as historically connected practices is our use of previously developed models of cosmological and geographic orientations linking the politically independent towns in the valley (Lopiparo 2003, 2006, 2007). Lopiparo noted that orientations of burials at multiple Classic period sites were closely aligned with each other (Figure 2). Burials at CR-80, CR-103, and CR-381 shared a very narrow range of orientations, at 24° or perpendicularly within several degrees of 114° and 294°, though they often did not align with the structures or earthen platforms in which they were interred. Lopiparo (2007) showed that the main plaza groups at Travesía, Currusté, and Cerro Palenque also shared a similar orientation with the burials and were generally aligned north-northeast/south-southwest (NNE/SSW) but with slight variations in precise orientations: 17° at Currusté, 25° at Cerro Palenque, and 28° at Travesía (Figure 3a). Two extremely eroded burials at Currusté were oriented with their heads pointed to the NNE. One was so badly preserved that it was not possible to discern a precise angle, but the angle of the other was approximately 15°. Both were closely aligned with the main plaza group at Currusté.

Superimposing these orientations on a map of the valley revealed that the NNE/SSW burial axes and the axes of the main plaza groups at the three centers aligned with the Montaña de Santa Bárbara at the southern end of the valley (Figure 3b). At 2,744 m, this is the tallest mountain in the ranges that surround the valley. The perpendicular east-southeast/west-northwest (ESE/WNW) orientation aligned burials and main plazas with sunrise on the eastern horizon at the winter solstice and with sunset on the western horizon at the summer solstice. These alignments are not



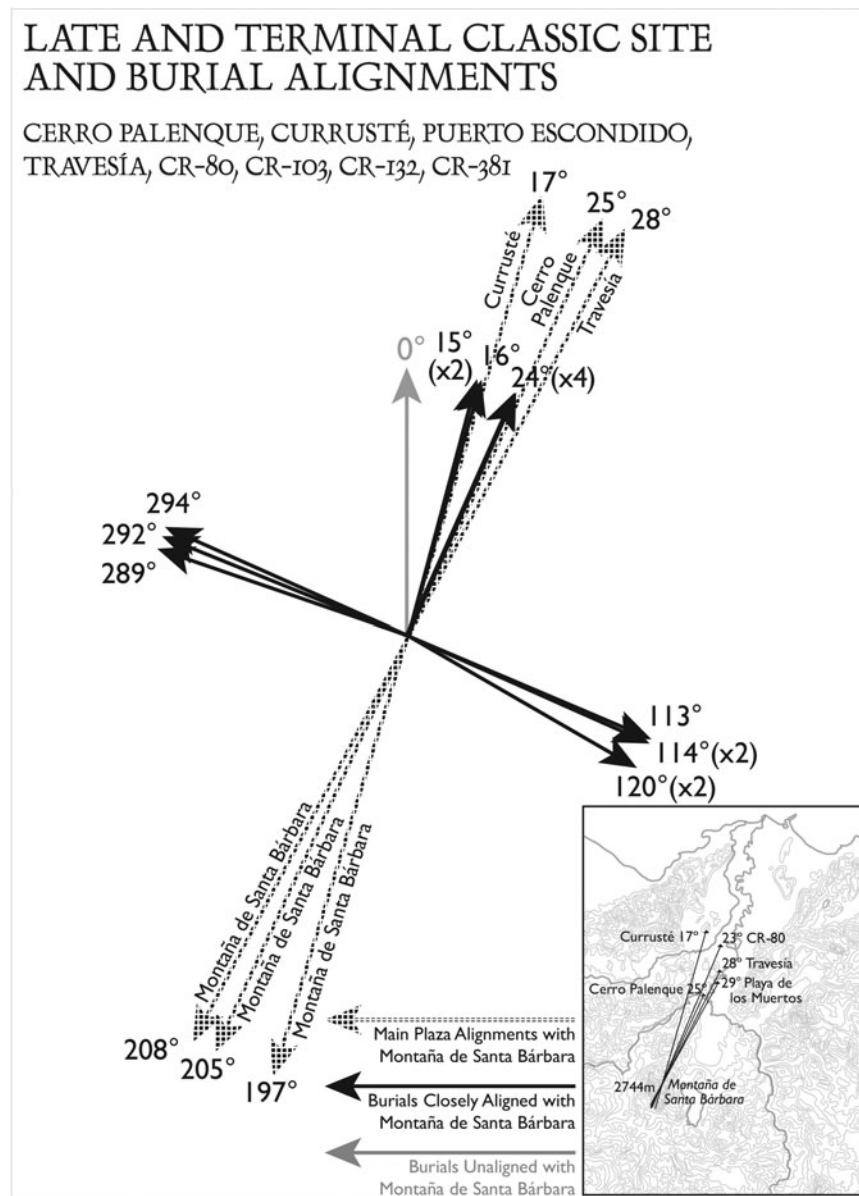
**Figure 1.** Map of lower Ulúa Valley with site locations (illustration by Jeanne Lopiparo).

precise, but rather share with other ground-based observational astronomy the use of features on the horizon to align practices with seasonal transitions (Lopiparo 2021:244–248).

The orientation of the main plaza at Travesía aligned the SSW axis of the site with the Montaña de Santa Bárbara and aligned the ESE/WNW axis of the site with the tallest mountain on the eastern side of the valley, over which the sun would have risen at the winter solstice, and the tallest mountain on the western side of the valley, behind which the sun would have set at the summer solstice (Figure 3c). It is probable that the Classic period residential compound of the most prominent family at Travesía was deliberately established at a location that would create this unique confluence.

In our present study, we find that burials at Formative period Playa de los Muertos already employed a NNE/SSW alignment orienting burials towards the Montaña de Santa Bárbara. Drawing on data from Late Formative to Early Classic burials at two additional sites, Puerto Escondido and Río Pelo, we suggest that landscape orientation of burials seen at Middle Formative Playa de los Muertos established a pattern used by later generations. We argue that these examples, from before 700 B.C. to A.D. 250, show long-term continuity of practices demarcating cosmological landscapes and their propagation as part of mortuary ceremonies shared by the politically independent towns of the valley.



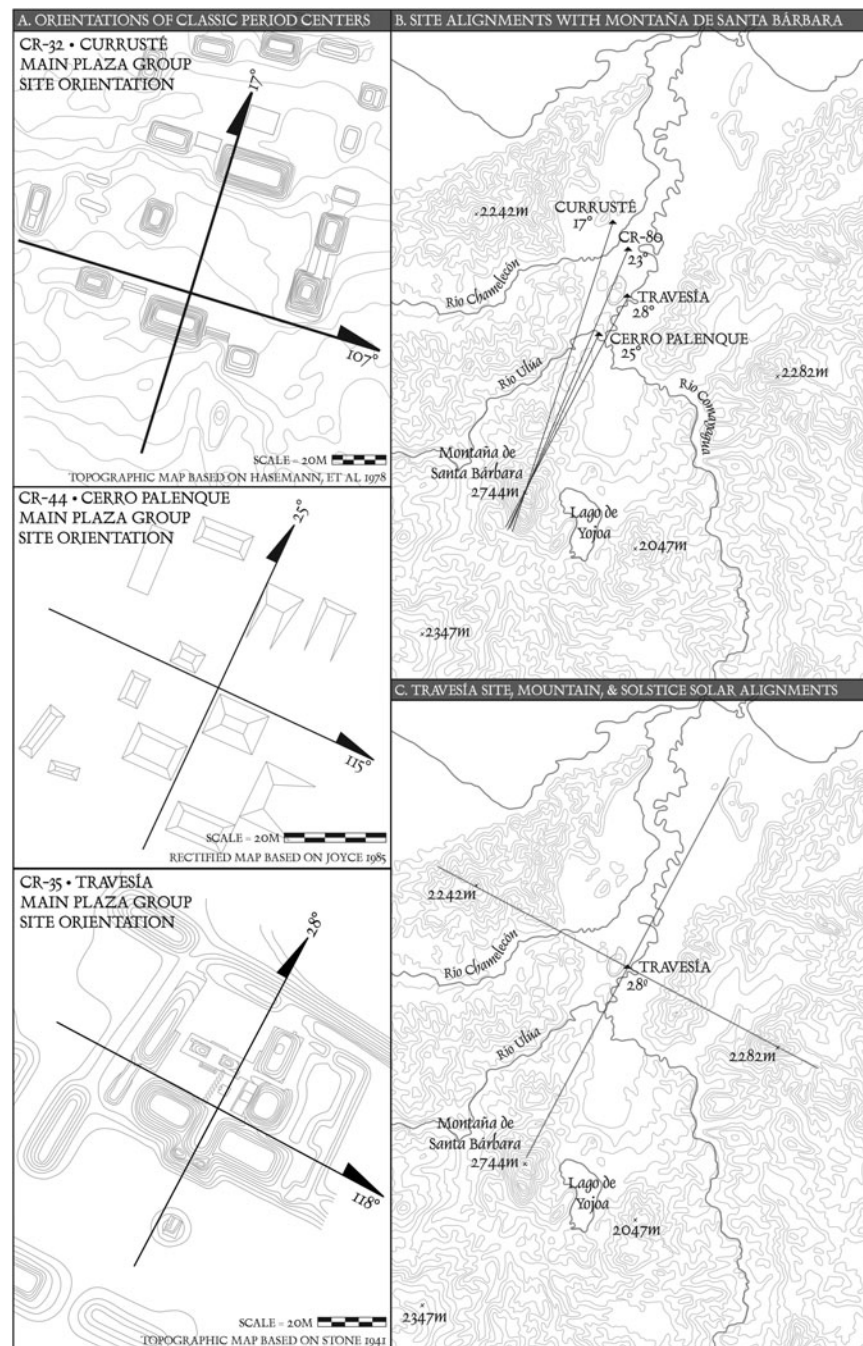


**Figure 2.** Late and Terminal Classic site and burial alignments at Cerro Palenque, Currusté, Puerto Escondido, Travesía, CR-80, CR-103, CR-132, and CR-381 (illustration by Jeanne Lopiparo).

As noted in previous work (Joyce 2017b), initially the symbolic significance of the Ulúa cosmological landscape was terrestrial, including caves in the mountains. None of the burials at Playa de los Muertos employ the alignments to solar phenomena that are important in the Classic period. Consistent with a new emphasis on solar cycles, Late Classic burials all have their heads oriented to the ESE, WNW, or NNE, a change from the Formative period. This preference was evident by the Early Classic. In the neighboring region of Yoro, a ballcourt was constructed with an alignment to summer solstice sunrise between 200 B.C. and A.D. 150, the transition between Late Formative and Early Classic (Joyce et al. 2009:65–68; Joyce et al. 2008:Table 1). By the seventh century, the main house compound at Travesía was located to combine solstice orientations with the traditional

orientation to the southern mountain. The adoption of solstice orientations may reflect ritual practices linking Honduran people to peers in the Maya Lowlands, for whom solstice observations were important (Dowd 2015).

During the transition to the Postclassic period, a new burial position, seated upright, was introduced in the Ulúa Valley. Multiple analyses show that for Maya people, the daily solar cycle, from sunrise in the east to sunset in the west, led to the identification of north with up, the position of the midday sun (Ashmore and Robin 2021). In the transition to the Postclassic period, a solar cosmological orientation that placed the body of the deceased in alignment with the position of the midday sun became dominant over the earlier alignment to significant mountains. The burials in this novel position occur with other evidence of



**Figure 3.** Orientations of: (a) Classic period centers; (b) site alignments with the Montaña de Santa Bárbara; and (c) Travesía site, mountain, and solstice solar alignments (illustration by Jeanne Lopiparo).

participation in religious practices creating new social relations with a cosmopolitan network extending from Mexico around the Yucatan peninsula (Joyce 2019, 2024).

### Middle Formative Origins: Playa de los Muertos

Primary extended burials were placed under or near residential platforms in Honduran settlements in the Middle Formative period, with contemporary and even earlier use of caves for secondary deposit of skeletal elements (Joyce

1999). After about 700 B.C., monumental platforms provided a new kind of context for burial for selected people (Joyce 1999). In residential settings and monumental platforms, some people were buried wearing ornaments. Many burials in residential settings included pottery vessels or other objects. Vessels were also deposited near skeletal elements in caves.

In the Ulúa Valley, mortuary practices of this period are represented in greatest detail by burials recovered at Playa de los Muertos in the 1920s (Table 1). While a full report of

**Table 1.** Middle Formative burials at Playa de los Muertos

Phase	Context	Designation	Angle	Position	Side	Body ornaments	Objects included	Notes	Source
1	Northern cluster	Burial 14 child	230°	flexed?		greenstone bead necklace shell and greenstone bead wristlet			Popenoe 1934
1	Northern cluster	Burial 10	250°	flexed	right side				Popenoe 1934
1	Northern cluster	Burial 8 child	30°	flexed		shell and greenstone bead necklace with 2 greenstone “duckbill” and 1 shell skull beads, greenstone double strand belt	3 ceramic vessels 2 figurines		Popenoe 1934
1	Central cluster?	Kennedy burial 2		flexed				east-west orientation	Kennedy 1981
1	Central cluster	Burial 9	290°	extended	prone				Popenoe 1934
2	Central cluster?	Kennedy burial 1		extended		jade bead wristlet		east-west orientation	Kennedy 1981
2	Central cluster	Burial 13	210°	flexed	right side?				Popenoe 1934
2	Central cluster	Burial 6	215°	seated					Popenoe 1934
1	Southern cluster	Burial C				greenstone bead necklace, 3 “duckbill” pendants		cranium only	Popenoe 1934
1	Southern cluster	Burial 3	195°	extended	prone		1 ceramic vessel		Popenoe 1934
1	Southern cluster	Burial 1	215°	extended	prone	greenstone bead necklace	1 ceramic vessel	in same grave as Burial 2	Popenoe 1934
1	Southern cluster	Burial 2	35°	flexed	right side	greenstone ear spools	1 ceramic vessel	in same grave as Burial 1	Popenoe 1934
2	Southern cluster	Burial A child		extended	prone	shell bead wristlet			Popenoe 1934
2	Southern cluster	Burial B		extended	prone		2 ceramic vessels 2 stone objects		Popenoe 1934
2	Southern cluster	Burial 12	40°	extended	prone?				Popenoe 1934
2	isolated, east of northern cluster	Burial 11	5°	extended	supine	fired clay ear spools, incised	7 ceramic vessels		Popenoe 1934
1	isolated, south of central cluster	Burial 4	180°	disturbed		grey stone pendant in shape of bivalve	2 ceramic vessels 2 ceramic stamps 5 stone tools 2 pieces of possible stalactites		Popenoe 1934
1	isolated, south of central cluster	Burial 5	275°	flexed?	right side	greenstone bead wristlet fired clay ear spools	9 ceramic vessels 6 ceramic objects 3 stone tools		Popenoe 1934
1	isolated, south of northern cluster	Burial 7	215°	extended	prone	greenstone pendant	2 ceramic vessels 3 obsidian blades 1 stone tool pigment		Popenoe 1934

the Playa de los Muertos excavations was never published, we combine details from a published article (Popenoe 1934) with data from Joyce's recording of the collections curated at Harvard's Peabody Museum. Our analysis shows that groups of burials were placed in clusters, likely residential settings (Figure 4). A few burials in locations away from these clusters had more complex burial goods.

Initially, three burials (Table 1: Burial A, B, and C), one the remains of a child, the other two, adults, were recorded as a single cluster on the south end of an embankment actively eroding into the Ulúa River. The child and one adult were buried wearing jewelry, shell and jade in the case of the child, jade alone for the adult. The second adult, with no recorded body ornaments, was buried with two pottery vessels and two stone objects. A year later, the same area yielded four more burials from the same cluster (Figure 4; Table 1). The excavator assigned the seven burials in this cluster to two distinct strata, one 5.0–5.2 m deep (Burials C, 1, 2, 3), and one at depths from 2.0 to 4.0 m (Burials A, B, and 12). Six additional burials were excavated, forming central and northern clusters. These also included burials in two distinct strata. Burials 4, 5, 7, and 11 were not close to any cluster, each encountered apart from any other recognized features at depths from 4.4 to 4.7 m.

We propose that the clusters of burials were placed by three burying populations living in nearby houses, the remains of which were not recognized during early twentieth-century excavations. Almost 50 years later, renewed excavations in what remained of the site detected features composing house foundations, trash pits, and working surfaces beginning ca. 2 m below current ground surface extending to 4 m deep (Kennedy 1981:49). Distinct strata with refuse deposits, a cache of three vessels, and an intact hearth formed the context for two additional burials (Kennedy 1981:52–57). The excavator defined “two distinct

cultural horizons,” one at 2.0–2.7 m deep associated with a 3.1 m long house pit, and an earlier one at 2.8–3.4 m associated with the remains of a second house (Kennedy 1981:57–58). Two burials were recovered in association with these features (Kennedy 1981:49–50). The first was an extended burial “oriented from east to west” at a depth of 2.85–3.05 m below the surface. The person in this burial was wearing a jade bead wristlet. At a depth of 4.0–4.2 m, a second burial was encountered, flexed but also described as oriented east to west, without any accompanying objects (Kennedy 1981:50).

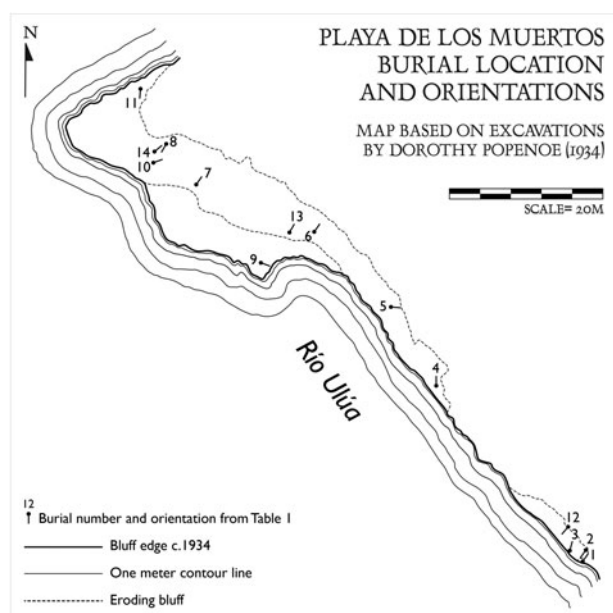
We recognize an early occupation (Kennedy's Sula ceramic complex, now dated as 700–400 B.C.; Joyce et al. 2008) represented by residential structures buried between 2.8 and 3.4 m deep, associated with burial practices that resulted in Popenoe's “earlier stratum” of burials. A later occupation (Toyos complex, ca. 400–200 B.C.) with a better-preserved house structure at 2.0–2.7 m deep corresponds to what Popenoe recognized as her later stratum of burials. The burials at this site thus come from a multigenerational residential population placing the bodies of at least some of the dead to rest, including adults and children, below floors of houses and house yards.

Popenoe (1934) recorded detailed information about burial position and orientation for 14 burials. Nine have a NNE/SSW orientation, three with their heads oriented to the NNE and six with their heads oriented to the SSW. These burials were closely aligned with the Montaña de Santa Bárbara (Table 1, Figure 5), suggesting that this key point on the landscape was important to the people of Playa de los Muertos. This pattern conforms to the tendency for Classic period burials to be oriented to common features on the landscape, and to the Montaña de Santa Bárbara in particular, observed in earlier work (Lopiparo 2007).

Two adults (Burials 1 and 2) in the southern cluster shared a single burial pit, their bodies at opposite angles. Nine bodies were in extended position, the majority prone, and seven were flexed. Prone and flexed positions were employed both early and late. Burial 6, placed in the late period, was in a seated posture. Clusters reflected distinct preferences in burial position, with all burials in the northern cluster flexed and all but one burial in the southern cluster in an extended prone position. The central cluster contained burials in both positions, as well as the unique burial in seated position.

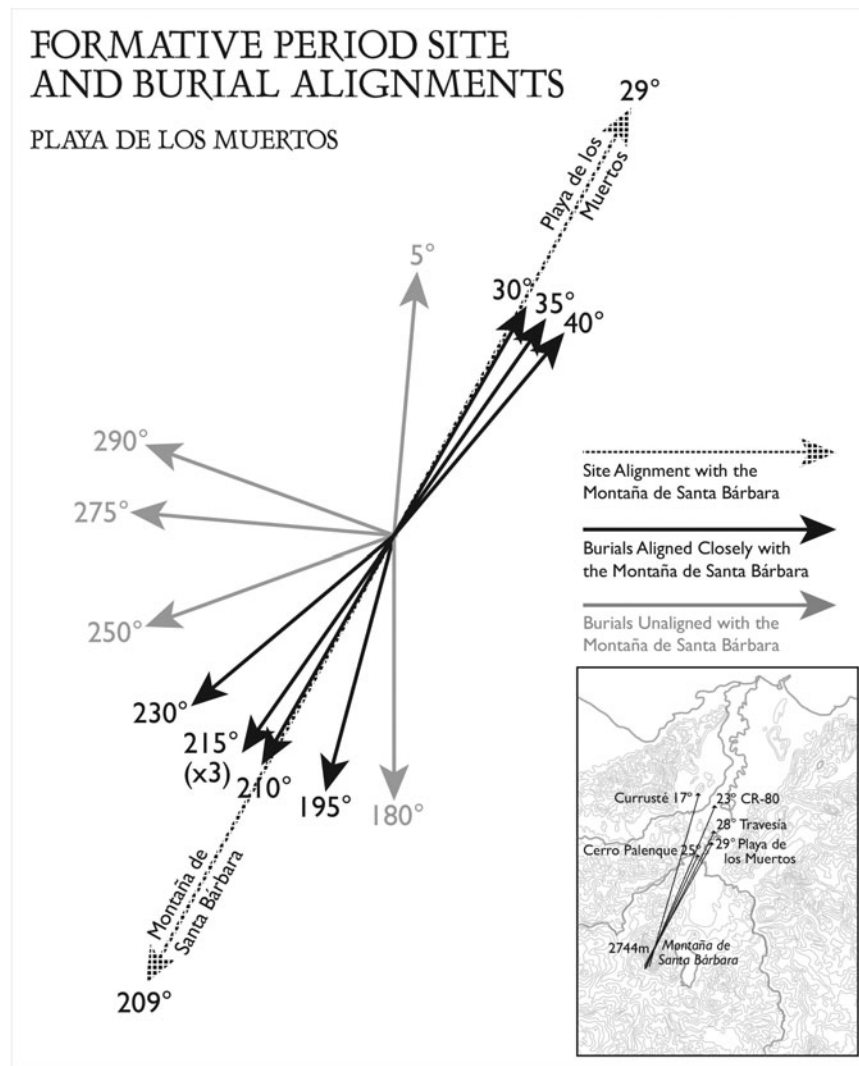
About half the burials included no artifacts. Two contained only ceramic vessels and stone objects. Seven burials that included body ornaments also contained other artifacts. Six of the dead were buried wearing jade or jade and shell ornaments, with shell ornaments distinctive of three burials identified as children. Two of these (Burials A and 14) lacked any additional burial accompaniments. Burial 8, however, was among the most elaborate at the site, with three ceramic vessels and two figurines, the only examples of figurines in the 19 documented burials.

Four burials (Burials 4, 5, 7 and 11) were isolated from the three clusters (Figure 4). They stand out not only for their location but for their large and distinctive burial assemblages, containing items not seen otherwise, including pigments and tools for preparing and applying them. They



**Figure 4.** Plan showing locations and orientations of burials at Playa de los Muertos (illustration by Jeanne Lopiparo).





**Figure 5.** Formative period site and burial alignments at Playa de los Muertos (illustration by Jeanne Lopiparo).

included a large number of pots, some with complex iconographic motifs. These were all adults, two (Burials 5 and 11) wearing ear ornaments, and the other two wearing unique stone pendants. In figurines of this period, ear ornaments and unique pendants are interpreted as characteristics of representations of elders, older adults in seated postures (Joyce 2003). We suggest these four adults had unique status in the community that led to them being singled out for special burial treatment beyond their own household.

Mortuary ritual at Playa de los Muertos was thus complex. The treatment people underwent at the transition from life to death was part of a series of life-cycle rituals emphasizing aspects of embodiment also evident in figurines (Joyce 2003). Body ornaments included in burials related the person to the age-based categories of child, young adult, and older adult, which were singled out in visual culture. Yet specific ornaments of each burial were individualized. The children in Burials A and 14 each wore wristlets that included shell beads but in different arrangements (Burial A had only shell beads and Burial 14 had rows of greenstone beads on either side of a row of white shell

beads). The child in Burial 8 wore a necklace of shell beads with a shell skull and two greenstone duckbill pendants, while the adult in Burial C wore a greenstone bead necklace with three duckbill pendants.

Social relations were indexed in the more isolated burials by the inclusion of vessels appropriate for food sharing. Based on vessel forms, we suggest mortuary ceremonies involved shared meals. Small cylindrical cups of an appropriate size for drinking were included in at least three burials (Burials 3, 8, and 11). The most distinctive vessels found are spouted bottles (Burials C, 8, and 11). In contemporary deposits at Puerto Escondido, residue analysis confirmed similar bottles contained cacao (Henderson et al. 2007; Joyce and Henderson 2007). We thus suggest mortuary meals at Playa de los Muertos included cacao drinks.

Burial contents not only connected the dead to the living; they commemorated connections to ancestral times. Miniature pots in isolated Burials 4, 5, 7, and 11 reproduce forms and decorative motifs already archaic by 700 B.C. Too small to be of pragmatic use for food storage or serving, several were identified by the excavator as containing pigment.



One miniature jar has incised designs that include alternating profile zoomorphic faces, one with a prominent shark's tooth. These motifs are similar to, perhaps based on, Olmec-related designs employed by potters at Puerto Escondido between 1100 and 900 B.C. (Joyce and Henderson 2010, 2017), which reflected the emergence of a cosmological understanding of the lower Ulúa Valley as a place at the edge of primordial oceans (Joyce 2017b:153–160).

We suggest that primary burials at Playa de los Muertos were one stage in multipart mortuary cycles that also involved deposits of selected skeletal remains in caves. In Honduras, secondary burial in caves was recognized in Olancho in eastern Honduras, in the Aguán Valley northeast of the Ulúa Valley, and in the Copan Valley to the west (Brady et al. 2000; Gordon 1898a; Healy 1974; Herrmann 2002; Joyce 1999, 2011). Caves in Olancho were used before 900 B.C. and continuing into the Middle Formative, contemporary with Playa de los Muertos (Brady et al. 2000; Herrmann 2002). Caves in the Aguán Valley, the known cave burial site closest to the lower Ulúa Valley, contain figurines and vessels identifiable with styles defined at Puerto Escondido for the period 1100–900 B.C. (Joyce 2003; Joyce and Henderson 2007). At Copan, vessels from caves resemble others in primary burials in household compounds dating before 900 B.C. (Viel and Cheek 1983). Continued use of the Copan and Aguán caves contemporary with Middle Formative Playa de los Muertos is less certain than at Olancho, but Classic period use of caves at Copan has been confirmed.

These regional patterns suggest that during the Formative period, in villages across Honduras, residential group burial was the primary mortuary treatment, in some cases followed by secondary mortuary rituals resulting in placement of bones in mountain caves. During this cycle, individualization of the dead in primary burials through wearing unique body ornaments was followed by the creation of a communal group of less individuated ancestral persons. An interplay of individualization, commemoration of relations to the burying community, and embedding in a cosmological understanding of the relationship of the living to the ancestors anchored in landscape features, specifically mountain caves, was established by the end of the Formative period. This provided a framework for the development of mortuary ritual in the Classic period by the descendants of the people of Playa de los Muertos and other early villages.

### Classic Period Mortuary Contexts

After a gap of more than 600 years, our record of burial practices resumes with data from multiple Classic period sites. For the first part of the Classic period (ca. A.D. 400–630), we draw on information from Puerto Escondido (Joyce 2011) and excavations at Las Flores Bolsa and Playa de los Muertos (Kidder and Strong 1936; Strong et al. 1938). Our data for the period after A.D. 630 come from excavations at sites including Currusté (CR-32), CR-68, CR-69, CR-80, CR-103, CR-132, CR-157, and CR-381 (Hasemann 1979; Hendon et al. 2014; Lopiparo 1994, 2003; Swain 1995). Most of these sites are residential. Currusté, CR-157,

and CR-132 each have some nonresidential architecture, but the primary burials come from residential settings, making these samples comparable in social context.

### Early Classic Mortuary Data

Our largest Early Classic period sample (Table 2) comprises 21 burials in house clusters arranged around external yards containing burned features and associated with bell-shaped storage pits at Puerto Escondido (Joyce 2011). Extended burials were most common (16 examples). At least three skeletal deposits consisted of isolated elements, long bones in two cases and a cranium (without mandible) and ulna in a third. Red pigment applied to these bones supports their interpretation as products of secondary mortuary treatment within the village. Three juveniles were identified, and at least one burial was of an adult woman.

Early Classic burials at Puerto Escondido were placed under house floors or in adjacent house yards. The position of the body is generally extended, as it was most often at Playa de los Muertos. Yet in other ways, the burial practices of the Classic period appear quite different. Most of those buried wear no body ornaments, the principal exception being earspools of fired clay identical to those in Formative period burials. Complete vessels and other artifacts are absent.

Our analysis includes one burial from Río Pelo (Wonderley 1991) and 10 from Las Flores Bolsa, which included adult and juvenile males and females, as identified by the original excavators (Kidder and Strong 1936). We identified two additional burials from excavations at Playa de los Muertos dating between A.D. 250 and A.D. 450 based on associated ceramics. These burials were adults, one identified as female, and both in extended positions described as supine and on the left side. As discussed further below, these burials may show transformation in the practice of including pottery vessels in burials toward forms of commemorative structured deposition that became common in the Late Classic period.

### Late to Terminal Classic Mortuary Data

We examined data from 10 sites to explore Late to Terminal Classic burial practices and secondary mortuary features (Table 3 and Table 4). Our original model of Late to Terminal Classic mortuary practices is based on fine-grained excavations by Lopiparo (2003, 2006, 2007, 2008, 2009) at Currusté, CR-80, CR-103, and CR-381. Based on our participation in earlier excavations at CR-103 and CR-132, we added five mortuary contexts from CR-103 (Murray 1985; Joyce personal communication, 2024) and six from CR-132 (Lopiparo 1994; Swain 1995). Information recorded in a field report of 35 burials excavated in residential groups at CR-68 and CR-69, although less complete, was also reviewed in our analysis (Hasemann 1979), as were Late Classic burials from Las Flores Bolsa, recorded in a field catalog that provided partially comparable information (Kidder and Strong 1936).

Most of the burials at the sites where Lopiparo (2003) excavated were extended on their sides and were adjacent to house structures or at the bases of house platforms rather

**Table 2.** Early Classic period burials

Site	Context	Orientation	Angle	Head	Position	Side	Notes	Source
CR372	4D-16	NNE-SSW	31°	NNE	extended	left side, facing east		Joyce 2011
CR372	4D-10/E-21	WNW-ESE	301°	WNW	extended	right side facing south		Joyce 2011
CR372	4H-4/H-7/ H-8/I-16	E-W	92°	E	extended	right side, facing north		Joyce 2011
CR372	4R-8/R-16	WNW-ESE	282°	WNW	extended	left side, facing north	child burial	Joyce 2011
CR372	4S-54	NNE-SSW	~18°	NNE	extended	left side, facing east	dense red pigment adhering to bones; lower body not excavated; burial angle approximated from upper body	Joyce 2011
CR372	4S-59	ESE-WNW	97°	ESE	extended	right side, facing north		Joyce 2011
CR372	4Y-7/Y-15/ X-1	WNW-ESE	301°	WNW	extended	too eroded		Joyce 2011
CR372	4Z-34/P-8	SSW-NNE	209°	SSW	extended	right side, facing east		Joyce 2011
CR372	4AS-14/ AS-21	NW-SE	305°	NW	extended	left side, facing north	child burial	Joyce 2011
CR372	4AU-51/ AU-55/AT-52	ESE-WNW	~108°	ESE	extended	right side, facing north	very eroded; burial angle approximated from position of leg bones and cranium	Joyce 2011
CR372	4AV-2	UNKNOWN					disturbed, partial burial; burial orientation and position unknown	Joyce 2011
CR372	4BB-7/ BC-15/ AS-22	NNE-SSW	29°	NNE	extended	left side, facing east		Joyce 2011
CR372	4BD-23	ESE-WNW	105°	ESE	extended	right side, facing north	child burial	Joyce 2011
CR372	4DL-17/ DL-18	NNE-SSW	~16°	NNE	extended	left side, facing east	very eroded; burial angle approximated from position of leg bone and cranium	Joyce 2011
CR372	4DM-6	UNKNOWN					partially excavated; burial orientation and position unknown	Joyce 2011
CR372	4DP-7/DP-8/ DP-9	NNE-SSW	~20°	NNE	extended	too eroded	very eroded; burial angle approximated from position of leg bones and cranium	Joyce 2011
YR-25 Río Pelo	Mound II	ESE/WNW	~118°	ESE	extended	supine	burial aligned with long axis of Mound II; burial angle approximated from orientation of Mound II	Wonderley 1991

Las Flores Bolsa	Exc I P5 Burial A2	UNKNOWN	N	extended	prone, facing west	adult male	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P7 Burial A4	UNKNOWN	W	extended	left side, facing north	adult female	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P7 Burial A5	UNKNOWN	S	extended	right side, facing east	adult male	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P7 Burial A6	UNKNOWN	N	extended	supine, facing east	adult male	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P7 Bur A7	UNKNOWN	E	semi-flexed	right side, facing north	adult male	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P7 Bur A8	UNKNOWN	W	extended	right side, facing north	adult female	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P7 Bur A9	UNKNOWN	E	extended	left side, facing south	juvenile male	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P8 Bur A10	UNKNOWN	E	extended	prone, facing north	adult female	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	Exc I P9 Bur A11	UNKNOWN	E	extended	right side, facing north	juvenile female	Kidder and Strong <a href="#">1936</a>
Las Flores Bolsa	East of Exc I Bur A13	UNKNOWN	E	extended	left side?, facing south	adult male	Kidder and Strong <a href="#">1936</a>
Playa de los Muertos	Exc I P1 Burial 1	UNKNOWN	W	extended	supine	adult; ceramic vessel, obsidian blade, labret	Kidder and Strong <a href="#">1936</a>
Playa de los Muertos	Exc I P1 Burial 2	UNKNOWN	E	extended	left side, facing south	adult female; ceramic vessel	Kidder and Strong <a href="#">1936</a>

**Table 3.** Late and Terminal Classic period burials

Site	Context	Orientation	Angle	Head	Position	Side	Notes	Source
CR32	22AC-4/ AC-11	NNE/SSW	15°	NNE	extended	too eroded		Lopiparo 2008
CR32	24AI-24	NNE/SSW	too eroded	NNE	extended	too eroded		Lopiparo 2008
CR80	11M-8/ O-13	NNE/SSW	24°	NNE	extended, legs slightly flexed	left side, facing east	western burial in the double burial	Lopiparo 2003
CR80	11N-10	NNE/SSW	24°	NNE	extended, legs slightly flexed	left side, facing east	eastern burial in the double burial	Lopiparo 2003
CR80	11R-7/ Y-6	WNW/ESE	294°	WNW	extended	left side, facing north		Lopiparo 2003
CR80	11S-2/ U-2	NNE/SSW	24°	NNE	extended	left side, facing east		Lopiparo 2003
CR80	11BP-5/ BW-3	ESE/WNW	120°	ESE	extended	right side, facing north		Lopiparo 2003
CR80	11BZ-5/ CE-3	NNE/SSW	15°	NNE	extended	left side, facing east		Lopiparo 2003
CR103	10K-11	ESE/WNW	120°	ESE	extended	right side, facing north	missing lower legs and feet	Lopiparo 2003
CR103	10X-3	WNW/ESE	292°	WNW	semi-flexed	right side, facing south	infant burial	Lopiparo 2003
CR103	1980 Pit A/Pit B	ESE/WNW	114°	ESE	extended	right side, facing north		Joyce field notes 1980
CR103	1980 Capa I	ENE/WSW	incomplete	ENE	flexed	left side, facing south	infant burial; partial burial	Joyce field notes 1980
CR132	21C-11/ D-12	NNE/SSW	24°	NNE	extended	left side, facing east	child burial	Lopiparo 1994
CR132	22B-10	ESE/WNW	114°	ESE	semi-flexed	right side, facing north	infant burial	Swain 1995
CR132	22D-8	WNW/ESE	289°	WNW	semi-flexed	right side, facing south	infant burial	Swain 1995
CR132	22D-12	NNE/SSW	incomplete	NNE	extended	left side, facing east	partially excavated	Swain 1995
CR132	22H-6	N-S	0°	N	extended	right side, facing west		Swain 1995
CR372	4BO-53	NNE/SSW	~16°	NNE	extended	supine, facing east	bell-shaped pit; cranial deformation; legs crossed at ankles	Joyce 2011
CR381	1H-7/ O-6	ESE/WNW	113°	ESE	extended	right side, facing north	child burial	Lopiparo 2003
Las Flores Bolsa	Exc 2 P3 Bur A14	UNKNOWN		N	extended	prone, facing west	adult male	Kidder and Strong 1936



**Table 4.** Classic period bone bundles and secondary burial data

Site	Context	Skeletal elements	Description	Source
CR32	22AC-13	arm bones and teeth	possible bone bundles	Lopiparo 2008
CR32	23AE-18/AE-22/ AI-6/AI-8/AK-6	two crania and multiple concentrations of disarticulated, fragmented long bones, including arm and leg bones	at least eight long bone bundles and two disarticulated crania	Lopiparo 2008
CR68	Burial 2	cranium	disarticulated cranium seated on its base facing N	Hasemann 1979
CR69	Burial 10/ Burial 8	cranium placed in extended burial	disarticulated cranium (Burial 10) seated on its base facing N, resting on ilium of Burial 8	Hasemann 1979
CR80	11BQ-4/CD-2	two deposits of fragmented long bones and teeth (too fragmented to identify)	possible bone bundles	Lopiparo 2003
CR103	10F-3	multiple disarticulated, fragmented long bones (too fragmented to identify)	two bone bundles	Lopiparo 2003
CR103	3D S8E0	two crania	two disarticulated crania	Murray 1985
CR132	22D-6	two fragmented crania	two disarticulated crania	Swain 1995
CR132	22D-7	arm bones and scapula	possible bone bundle (found directly below the crania fragments described above)	Swain 1995
CR157	41M	femur	bone bundle at base of building renovation	Hendon 2002
CR372	4DA-3/DA-4/ DA-6/DA-30	ulna, cranium (no mandible)	bone bundle with red pigment on cranium	Joyce 2011
CR372	4DO-14	long bone, possible tibia	bone bundle with dense red pigment	Joyce 2011

than directly under house floors, a pattern that Hasemann (1979) also noted for CR-69. One notable exception was a double burial at CR-80, with two adults interred side by side beneath the floor of a structure on the tallest platform surrounding the patio. Hasemann (1979) noted that almost all of the adult and subadult burials at CR-69 were extended (27 out of 28). Where burial position could be determined, three were supine or prone and 20 were interred on their side. Excavations at CR-132 uncovered six sets of human remains (Swain 1995), including two infant burials, two adult burials, and two secondary burials. These came from what was likely a household group that predated construction of a ballcourt that later covered the area (Hendon et al. 2014:69).

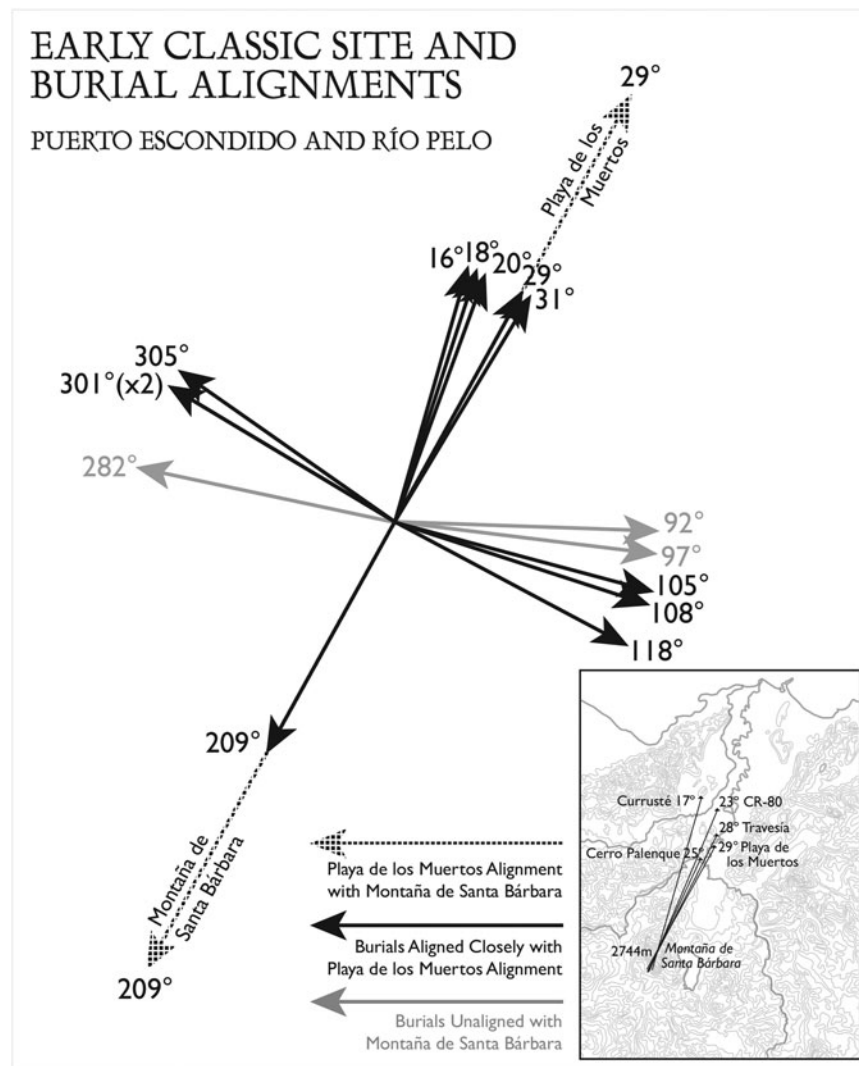
### Afterlife cycles and Social Integration: Interpreting Classic Period Mortuary Practices

Based on our analysis of Classic period burial data, we identify four aspects of mortuary ceremony contributing to the reproduction of social relations in the heterarchical network of communities in the Ulúa Valley. First is a shared approach to disposal of the dead rooted in an ancient orientation to sacred mountains, which develops with the addition of solar orientations during this period. Second is variation with aspects of personhood, most notably age. Third is the integration of burials into more extensive patterns of ritual action that we recognize through analysis of

structured deposition. Finally, we suggest that social relations formed around care for the remains of deceased group members and that commemoration of the dead perpetuated the integration of communities. We explore these patterns by connecting mortuary data to evidence from cosmology and visual culture.

### Burial Alignments, Geography, and Cosmology

The shared orientation of burials toward the Montaña de Santa Bárbara, already seen at Playa de los Muertos, established a pattern continued by Classic populations. Eleven out of 14 Early Classic burials at Puerto Escondido are oriented NNE/SSW or ESE/WNW, and among them, a cluster of six adhere remarkably closely to the angle between Playa de los Muertos and the Montaña de Santa Bárbara or are perpendicular to it (Table 2, Figure 6). An additional five burials are within 15° of that orientation. The only recorded Early Classic burial from a platform at Río Pelo employs this orientation as well. Based on Anthony Wonderley's (1991) site map and description, this burial was oriented perpendicular to the those at Puerto Escondido and Playa de los Muertos, at approximately 118°. The burials at Puerto Escondido and Río Pelo were not directly aligned with the Montaña de Santa Bárbara. Instead, they employed the predominant orientation used at Playa de los Muertos, where this angle had aligned with the mountain. Examples that span the Middle Formative,



**Figure 6.** Early Classic site and burial orientations at Puerto Escondido and Río Pelo (illustration by Jeanne Lopiparo).

Late Formative, and Early Classic indicate the long-term continuity of practices demarcating and perpetuating cosmologically significant landscapes as part of shared mortuary treatment.

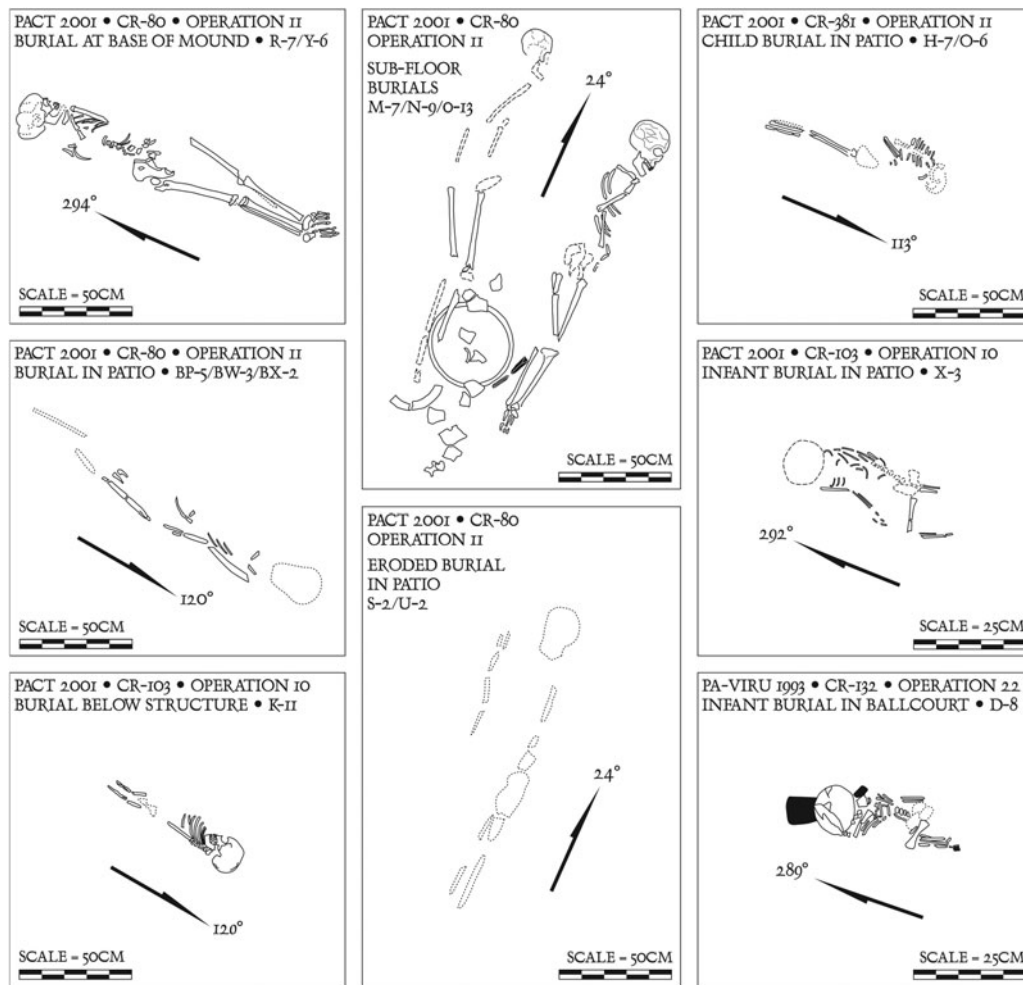
In Late Classic period burials, we see each community orienting itself to the Montaña de Santa Bárbara. At Curruté, CR-80, CR-103, and CR-381 burials were extended on their sides with their legs slightly flexed, oriented either NNE/SSW or perpendicular to this axis with an ESE/WNW orientation (Table 3, Figure 2, Figure 7). Six NNE/SSW burials were oriented with their heads pointing NNE. The four that were preserved well enough to determine burial position were on their left sides (facing east). Of the four ESE/WNW burials, two were oriented with their heads pointing ESE on their right side (facing north) and one was interred with its head pointing ESE on its left side (also facing north). The fourth was an infant, which was semi-flexed with its head pointing WNW but on its right side facing south.

Less precise burial data from other sites are consistent with this pattern. At CR-69, crania were oriented either to the north or the east in every case in which the excavator

was able to determine the burial orientation (Hasemann 1979). Descriptions of four burials at CR-103 appear consistent with this pattern (Murray 1985), and a field drawing of a fifth burial at CR-103 by Joyce shows it was oriented ESE/WNW at about 114°. Three burials recorded at CR-132 also conform to this shared orientation (Swain 1995).

Solar alignments, not detected in Middle Formative burials at Playa de los Muertos, are newly identifiable in Classic period burials. The new emphasis on solstitial alignments, seen in the placement of the main house compound at Travesía, may reflect adoption of cosmological ideas developed in the Maya Lowlands. Travesía's leading family had many connections with contemporary Lowland Maya noble families (Joyce 2017a:222–225, 260–261; Luke and Tykot 2007). Visual elements identical to images of dances that marked events in June at Yaxchilan appear on Ulúa Polychrome pottery created in the late eighth and early ninth century, another indication of integration of Maya cosmological concepts at this time (Joyce 2017a:174–175, 294–295).

Consistent with a new emphasis on solar cycles and the path of the sun, Late Classic burials all have their heads



**Figure 7.** Classic period burial orientations (illustration by Jeanne Lopiparo).

oriented to the ESE, WNW, or NNE, a change from the Formative period burials at Playa de los Muertos, where more than half had their heads oriented towards the SSW. This shift was already evident in the Early Classic, when the majority of burials had their heads oriented to the ESE, WNW, or NNE, and only one was oriented to the SSW. Of the 29 Early, Late, and Terminal Classic burials for which we determined the burial positions of the head, 24 are facing north or east, four are facing south, and one is facing west (see Table 2 and Table 3). Three of the four burials facing south are infants, and of the four infant burials, three are facing south. Differences in burial position were likely related to concepts of personhood as unfolding over life stages, an observation supported by other aspects of treatment of children.

#### Burial Position and Personhood

Beginning in the Formative period and continuing into the Terminal Classic, bodies of the dead were most commonly extended. Infant burials often present variations in burial patterns from adults in the same sites. They are more likely to be flexed, and it is not always possible to determine their

orientation. In one case from our excavations where we have a precise orientation for an infant burial (CR-103 10X-3), it faced in the opposite direction to the adult and subadult burials that share its angle of orientation (facing south instead of north). Joyce's examination of field drawings shows the same is true for a subadult burial documented at the site of Las Flores Bolsa (Kidder and Strong 1936).

The suggestion of a shared understanding of infants as distinct from adults is reinforced by other data. Infant burials at CR-132 shared the same WNW/ESE orientation as the infant at CR-103, one in the same position with their head to the WNW on their right side facing south, and the other with their head to the ESE on their right side facing north (Swain 1995). A second burial from CR-103 documented by Joyce was an infant flexed and placed into a small pit, oriented with the head towards the east-northeast (ENE). An infant burial at CR-69 was placed across the neck and torso of an adult (Hasemann 1979).

These differences in mortuary rituals distinguish life stages of children and adults. Late Classic Ulúa visual culture reinforces childhood as a distinct life stage. Figurines juxtapose children and adults, specifically, mothers holding smaller figures on or in front of their knee or grasping

one of their breasts (Lopiparo 2006). These children are sometimes dressed with ornaments and headdresses that echo those of the adults with whom they appear. Unlike in the earlier Playa de los Muertos culture, children do not seem to be independent subjects of Late Classic figurines, suggesting they were seen as dependent on adults to a degree that was more pronounced than in the Formative period. A shift in emphasis from Formative period individuation to Classic period community is also evident in broader ritual practices.

#### *Connecting the Community: Structured Deposition and Commemoration*

Ulúa Classic period burials were interred in earthen pits that were not prepared or distinguished from their surrounding fill. While associated grave goods are unusual, many burials are associated with structured deposition resulting from repeated ritual practices accompanying the interment of houses and their inhabitants, practices through which the living interacted with the dead (Lopiparo 2003, 2006, 2007, 2008, 2009, 2021). The concept of structured deposition, which was defined to identify materials that otherwise might be considered neutral forms of waste as residues of meaningful action (Richards and Thomas 1984), is useful in interpreting these practices as part of the ritualization of everyday actions (Bradley 2003). It allows us to connect burials with wider sequences of actions that were significant in reproducing communities.

While in most Classic period burials we excavated, no objects were deliberately included, earspools are a significant exception. Wearing earspools marked the achievement of adult status in Formative period visual culture (Joyce 2003). At Puerto Escondido, detailed analysis showed that most earspools in burial contexts were not pairs worn by the deceased, but fragments, sometimes of multiple different earspools (Joyce 2011). At this site, earspool fragments were statistically more likely to occur in units near burial locations. The structured deposition of earspools, and likely their predepositional breakage, were apparently steps in mortuary ritual.

Complex mortuary rituals connecting the dead to others may also be responsible for the few examples of Classic burials where more associated artifacts have been reported. At Early Classic Playa de los Muertos, one adult was buried with a complete fragmented vessel over the lower legs, and a second adult was buried with pieces of a single vessel next to and over the cranium (Kidder and Strong 1936). Rather than grave goods related to individual social identities, these vessels are residues of actions during placement of burials. In a second burial from Early Classic Playa de los Muertos, a fired clay body ornament, possibly a labret, was encountered near the cranium, and a single obsidian blade was near the left hand. In one burial from Santa Rita, a plain bowl was inverted over the skeletal remains of a child (Kidder and Strong 1936). An obsidian blade was noted in the earth around an adult skeleton at Santa Rita, and another near an adult female in a Classic burial at Las Flores Bolsa. Such individual objects are ambiguous; they could simply have been casually discarded in fill. We gain

confidence in our interpretation of these objects as evidence of structured deposition from other more complex contexts.

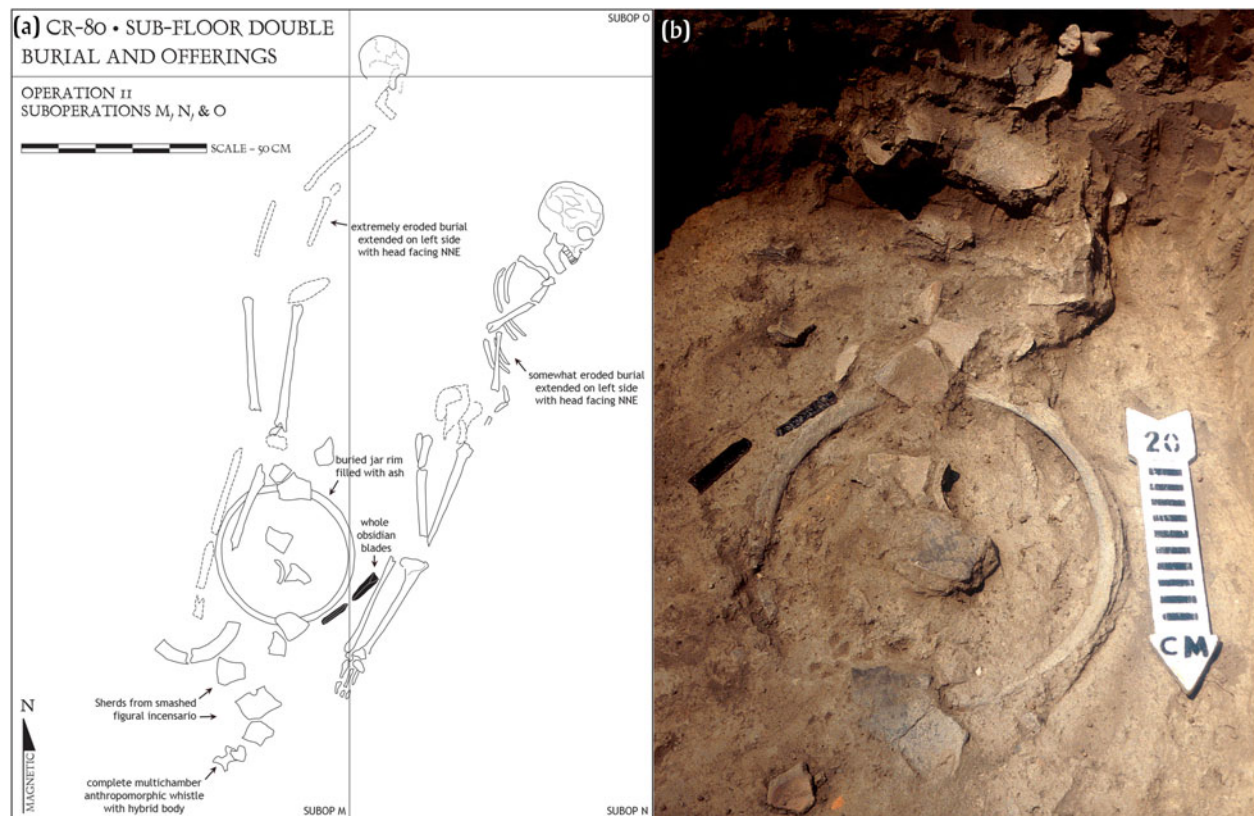
In a seventh-century burial from Puerto Escondido, an individual was placed in extended position on layers of carbon, ash, and clay in a subfloor pit with a restricted circular aperture (Joyce 2011). Fragments from at least five distinct earspools (including two complete earspools from different pairs, and seven other fragments) were in the pit fill. Also present were a variety of costume elements: a feline incisor, a shell “tinkler,” and a tubular gray ceramic bead. Like the fragments of earspools, although these were body ornaments, they were deposited in isolated ways, not worn. The only object clearly associated directly with the body was a rectangular, black obsidian plaque, abraded on all edges, made from a very large blade (30 by 32 mm). An example of an obsidian mirror, this costume element may once have been part of a larger assemblage like the other singular ornaments in this burial pit.

No complete artifacts were placed in this burial. The body was covered by lenses of carbon-rich soil alternating with clay, which included mixed pottery fragments, some from very unusual vessels, and obsidian flakes and blades, filling the pit. The pit neck was blocked by large ceramic sherds and fragments of up to 20 figurines. The final closing of the pit was accomplished by the deposit of pieces of three-dimensional effigies from two censer lids representing a feline and a standing human figure. Fragments of five small cylindrical *candaleros*, vessels used for burning resin, were included as well. The figurines and censers were used and discarded as part of a final stage of mortuary ritual after an earlier phase that included the burning of plant materials and the use and breakage of finely crafted vessels appropriate for serving beverages.

The inclusion of broken figurines inspired us to examine whether figurines were normal parts of cycles of mortuary ritual at Puerto Escondido. Fragments of figurines were present in surrounding fill near 14 of 18 burials included in the analysis (Joyce 2011). In contrast, only half of the 36 excavation units without burials had fragments of figurines. Figurines were apparently used in rituals carried out by the living near where the dead were buried rather than being deposited as individual possessions or personal identity markers of the deceased.

The locations of burials were sites for sequences of ritual practice through which the living interacted with the dead over time, processes that are archaeologically detectable in the form of structured deposition. Fine-grained excavations of an unusual double burial at CR-80, featuring two adults interred side by side beneath a house floor, provided another elaborate example (Figure 8a). Although these burials were only 50 cm apart and shared the same position and orientation, extended on their left sides with their heads pointing 24° NNE, stratigraphic evidence and differential preservation indicate they were not interred at the same time. The western burial was extremely eroded, leaving only casts of bones that were almost entirely disintegrated. While we were able to determine the position and orientation of the burial from these casts, no small bones were preserved, and the long bones and skull were extremely fragmented.





**Figure 8.** Subfloor double burial (a) and structured deposits (b) from CR-80 (illustration and photo by Jeanne Lopiparo).

The eastern burial was much better preserved. Though the skeleton was also fragmented and eroded, the small bones of the foot and ribs were still present and the skull and leg bones were much more intact. This differential preservation indicates distinct microenvironmental conditions, suggesting the two were not interred in the same burial pit.

Stratigraphic evidence indicates that multiple episodes of ritual activities preceded the first burial and followed the second (Figure 8b). First, a complete jar rim and neck, broken off a tall, flaring-neck jar, was buried upside down. Organic material was then burned inside of the cavity created by this buried, overturned jar neck, which was filled with ash. Ashen traces of a woven mat were found on the surface adjacent to the buried jar neck, and two whole obsidian prismatic blades were aligned next to it. The western burial was interred on top of this deposit, its legs partially covering the jar, indicating that the body was buried after the set of rituals associated with the buried jar neck. The legs of the western burial rested right on top of these deposits. In contrast, the base of the eastern burial was several centimeters above the level of the earlier deposits, providing additional evidence that the two burials were not interred at the same time in the same pit. After the second burial was placed, fragments of a figural *incensario* and a whole figural ocarina were interred above the burials near their feet. The base of this deposit is at the approximate level of the top of the burials, suggesting it comprised structured deposition from a later set of ritual activities in the same location.

Other examples of Classic period structured deposition associated with burials were not as elaborate as these two contexts. Several examples consisted of partial smashed vessels adjacent to or on top of burials. At Currusté, two layers of smashed ceramics were recovered from above a highly eroded burial in the earthen fill of a cobble mound (Lopiparo 2009). This included large sherds that comprised about half of two different undecorated, coarse paste jars with evidence of burning. At CR-132, one burial was described as having a large, smashed vessel placed at its feet (Swain 1995). Excavation photos reveal that the sherds, encountered in a circular pattern, were not from a complete vessel but rather a large fragment of a jar with evidence of burning. Pieces of obsidian and shell were recovered from below this ceramic deposit. Another burial in this area was associated with a series of deposits that included a dense lens of ceramics, shells, lithics, with carbon above the burial and a spondylus shell found nearby (Swain 1995).

These carefully excavated examples showing sequences of deposition involved in household mortuary practices allow us to interpret similar evidence described by earlier excavators as structured deposition. The presence of single obsidian blades near burials at Las Flores Bolsa and Santa Rita may be evidence of ritual action related to but distinct from interment (Kidder and Strong 1936; Strong et al. 1938). Two burials from Las Flores Bolsa rested near or over patches of burned clay, which could have been created in events involving burning of materials like that noted at CR-80. In two cases at Las Flores Bolsa, excavators noted

complete small vessels within a meter of a burial, not in apparent direct association, but possibly resulting from a sequence of ritual practices.

Across these contexts, a pattern of structured deposition incorporating roughly half of a broken vessel or figural artifact, sometimes associated with burning events, was common. If we did not recognize them as results of intentional breakage and structured deposition, deposits of partial artifacts like these could be misidentified or mischaracterized as fill (Lopiparo and Joyce 2023). Such structured deposits show that burials were part of sequences of ritual actions through which household members commemorated the dead.

Layered memory was created through interment, whether what was buried was a human body or a meaningfully arrayed group of artifacts (Joyce 2011). It was also created through disinterment and the afterlife cycles of humans as they transformed into ancestors via the transformation of bodies themselves (Lopiparo 2021), including the retrieval of human skeletal elements from primary burials and their incorporation in secondary deposits.

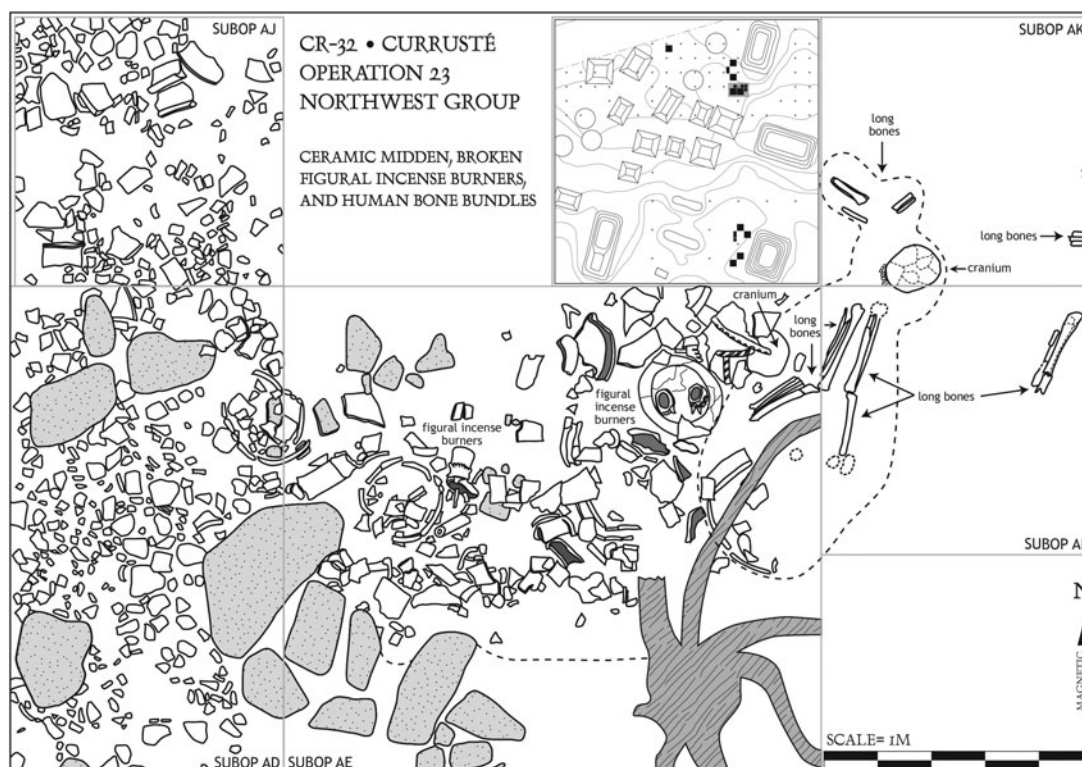
### Reentries, Bone Bundles, and Group Identity

Classic period mortuary practices included a cycle of secondary ritual that involved the manipulation of skeletal elements, notably long bones and skulls. The selection of bones to be reinterred in bundles in select locations, similar to practices in the contemporary Maya Lowlands (Chase and Chase 2011; Weiss-Krejci 2020), has deep history in Middle Formative Honduras, though the Classic period cycle of

mortuary ceremonies involved a significant change. Skeletal elements displayed in commemorative rites within Classic period settlements in the lower Ulúa Valley maintained integrity as bone bundles rather than being removed to distant, commingled sites of deposition in caves.

Structured deposition with evidence of multiple reentries, in many cases associated with human burials, has been described for sites throughout the valley, including deposits in which ceramic vessels, jar necks, figurines and figural whistles, and figural incense burners were used, smashed, and buried (Lopiparo 2021; Lopiparo and Joyce 2023). Additional evidence that implies reentry includes secondary burial practices and recovery of human bone bundles and disarticulated crania (Table 4) from at least seven sites (Hasemann 1979; Hendon 2010; Hendon et al. 2014; Joyce 2011; Lopiparo 2021; Murray 1985; Swain 1995).

At Currusté, Lopiparo (2008, 2021) documented the most elaborate example of secondary mortuary practices we have recorded. These deposits provide a particularly detailed window into the afterlife cycles of the ancestors, or the processes of exhumation, preparation, and bundling of skeletal elements and acts of care, feeding, and veneration that were key components of reciprocal relationships among the living and between the living and the dead (Lopiparo 2021). The deposit included six large figural censers that were smashed in place after use and were interred on top of multiple long bone bundles and two crania in a nonresidential setting at the western edge of the North Plaza (Figure 9). The deposit included a censer fragment showing a hand grasping a bundle of long bones tied at the ends (Figure 10a).



**Figure 9.** Currusté ceramic midden, broken figural incense burners, and human bone bundles (illustration by Jeanne Lopiparo).



**Figure 10.** Skeletal imagery: (a) *incensario* fragment of anthropomorphic hand grasping a long bone bundle from Currusté; (b) carved femur from CR-80; (c) stamps with skeletal imagery from CR-103, CR-80, and CR-381; (d) miniature mask mold and mask from CR-381; and (e) whistles from CR-381 (photos by Jeanne Lopiparo).

At Puerto Escondido, an articulated burial with pigment adhering directly to the bones is evidence of burial reentry, along with three deposits of crania and long bones covered with pigment and a deposit of multiple long bones (Joyce 2011). At Cerro Palenque, Julia Hendon recovered *incensario* fragments representing a long bone tied with rope, along with a single human femur, in structured deposition associated with the construction of a terrace (Hendon 2010). At CR-69, Hasemann (1979) noted a disarticulated cranium that was seated on the pelvis of an articulated burial, and at CR-103, Murray (1985) reported two skulls that were not associated with any other bones. Lopiparo also recovered a partial carved long bone from CR-80, which appears to be the distal end of a femur (Figure 10b), though we cannot be certain it is human because of modification and breakage.

Other examples may be more ambiguous, due to poor preservation and the complex occupation histories of sites. Multiple skull fragments, a disarticulated infant burial, and a deposit of arm bones and a scapula were documented in excavations at CR-132 (Swain 1995). Poorly preserved deposits of disarticulated long bones were recovered from Terminal Classic residential contexts at Currusté, CR-80, and CR-103 (Lopiparo 2003, 2008). We have recovered burials with missing limbs, for example, a burial at CR-103, missing

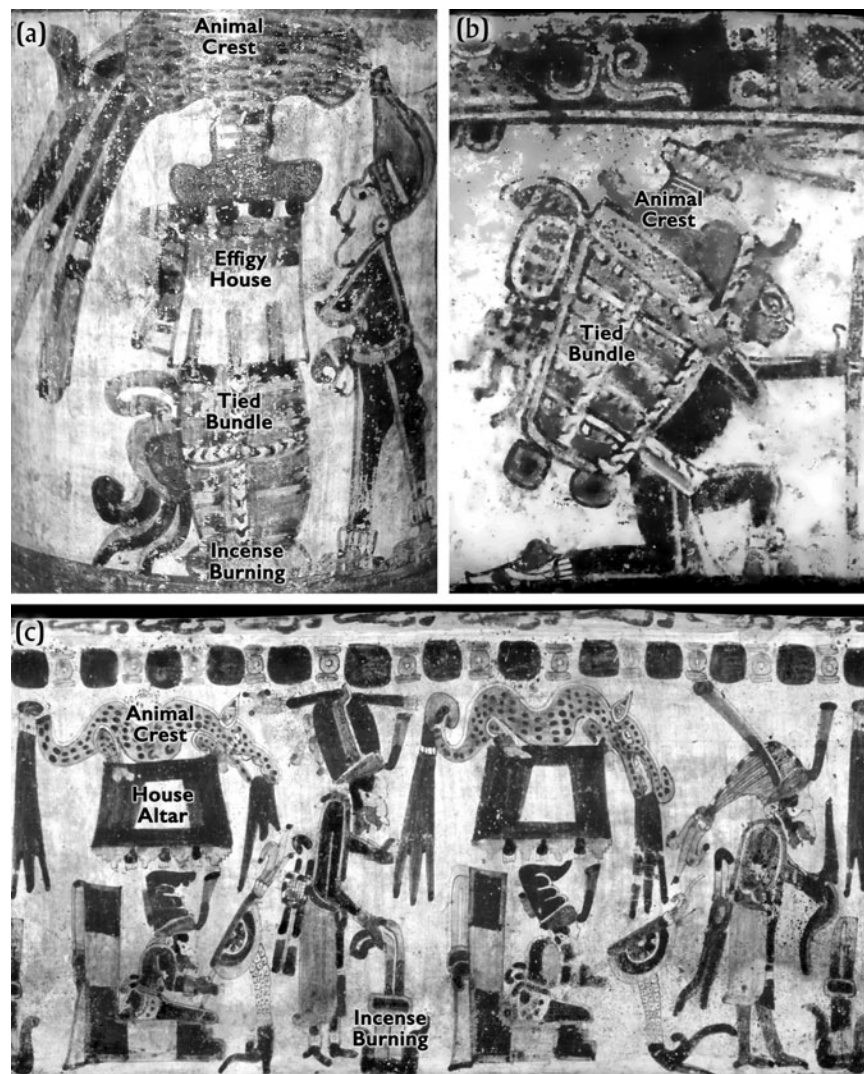
its lower legs, associated with a burned and buried house. We have also found evidence of disturbed burials, where only fragments of bone and teeth are recovered.

Excavations have revealed significant depositional evidence for interaction between the living and the dead at sites throughout the valley, including rituals of commemoration in place through time and burial reentry for the removal, treatment, bundling, circulation, and reburial of human skeletal remains. Related practices and iconography are also represented in Ulúa visual culture. In addition to the examples described above of *incensario* fragments representing long bones tied with rope, stylized representations of skulls appear in ceramic media, including stamps representing skulls or skeletal figures with skulls at their waist (Figure 10c), miniature masks representing skeletal faces (Figure 10d), and small skull whistles (Figure 10e).

Ulúa Polychrome vessels from the seventh and eighth centuries depict bundles as foci in rituals (Joyce 2017a). In the simplest versions, a vertically oriented object supports an animal figure. Joyce (2017a) has argued that these animals are anthropomorphized characters from founding narratives. One vessel of this kind shows a complex bundle with a human figure facing the animal (Joyce 2017a: Figure 26). The lower part of the bundle is an oval standing on low feet, and the bundle is tied with rope (Figure 11a). An orange, red, and white collar above the rope-tied bundle has rectangular tabs used by Ulúa artisans to represent bark paper. On top of this paper-topped, rope-tied bundle stands a bird with a long tail. An identical bundle is carried by a person using a tumpline in a procession on another eighth-century Ulúa Polychrome (Figure 11b). The details of the tied bundle link it to houses on other Ulúa Polychrome vessels. In one example (Figure 11c), a feline reclines on the roof of a profile building, paralleling the animal figures atop tied bundles (Kerr 1994:558). The roof has a fringe of tabs like those suggesting bark paper on the bound bundles. This image, and others like it, portrays an anthropomorphic figure seated inside the building, taking the place occupied by the bound bundle.

The equation of the bound bundle with a house is supported by a unique three-dimensional ceramic sculpture of a pregnant woman that originally stood on the lid covering one of the *incensarios* from Currusté (Figure 12). The woman carried a bundle on her back, in the form of a small three-dimensional house, supported by a tumpline (Lopiparo 2008, 2021). This sculpture was deposited as part of the elaborate incense burning and secondary mortuary rituals at Currusté that included the interment of multiple bundles of skeletal elements. The depiction of a hand grasping a bundle of bones from another figural censer from this deposit (Figure 10a) reinforces the association of incense burning with the care, feeding, and veneration of the ancestors. Maya ancestral shrines often took the form of miniature houses (Lorenzen 2005) like the one carried by the woman from Currusté, which is stylistically very similar to the carved, replica house shrines documented at Mayapan (Proskouriakoff 1962:335, Figure 6). We argue that both the bound bundles and the miniature house carried by the Currusté woman represented ancestral





**Figure 11.** Ulúa Polychrome vessels showing the link between tied bundles and ancestral houses. Comparison of vessels in: (a) the Museo de San Pedro Sula, Honduras (original photo by Russell Sheptak, used with permission); (b) the Hudson Museum at the University of Maine Hudson Museum (HM 516, Kerr database K6992); and (c) a vessel published as K4577 (Kerr 1994:558). Original photos (b) and (c) by Justin Kerr. Justin Kerr photograph collection, Dumbarton Oaks, Trustees for Harvard University, Washington, DC, used under a [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/) license.

connections of the social group created through mortuary rituals. The fact that she is pregnant further emphasizes the intergenerational connections between the living and the dead.

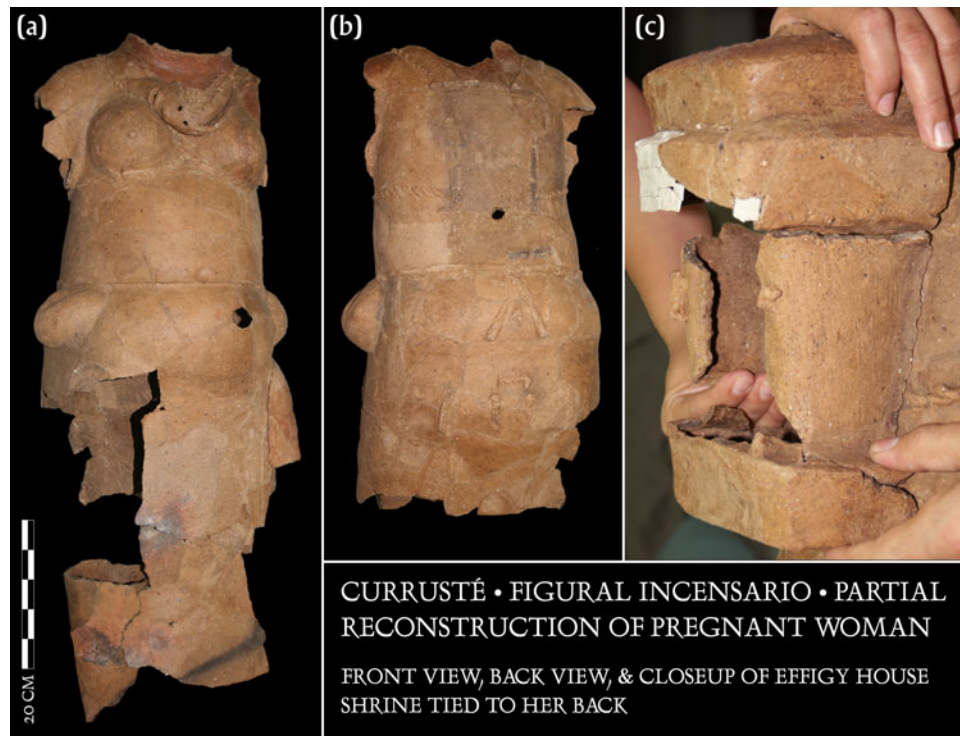
Compared to earlier Formative period burial practices, the Late to Terminal Classic Ulúa Valley de-emphasized individuation, creating connections among the population and placing people in relation to a shared cosmological landscape. The collective ancestral dead were kept close at hand, and both imagery and excavated deposits suggest the remains of some ancestral beings may have been bundled, handled, and engaged with in ritual. This emphasis on the collectivity changes with the transition from the Classic to the Postclassic period.

### Death in the Postclassic Ulúa Valley

Very few archaeological sites in the lower Ulúa Valley have recognized components dating after the Terminal Classic period. Only two sites yielded burials that can be attributed Postclassic dates. At Las Flores Bolsa, an Early Postclassic component with two or possibly three burials follows an earlier occupation with 11 burials that match the patterns Lopiparo defined for the Late to Terminal Classic (Joyce 1987; Strong et al. 1938). At El Remolino (CR-260), a multi-component site, the latest levels yielded one burial clearly dating to the Late Postclassic (Wonderley 1984).

We thus add to our analysis of late mortuary practices in the Ulúa region a series of burials and associated structured deposits from a central platform in a residential compound at Los Naranjos, a site located in the mountains south of the





**Figure 12.** Ceramic figural incense burner from Currusté showing a pregnant woman carrying an ancestral house with a tumpline (photos by Jeanne Lopiparo).

valley (Baudez and Becquelin 1973; Joyce 2017a:201–203). Here, a series of three structured deposits accompanies 10 interments, one assigned by the excavator to the Late Classic Yojoa phase, the rest to the Postclassic Rio Blanco phase (Table 5).

The sole Yojoa phase burial, Burial 10, has an orientation skewed from the cardinal direction, also not simply aligned with the platform in which it was placed, like Ulúa Classic period burials. This orientation, approximately 30°, suggests a shared practice of using an alignment towards a local, but distinct, cosmography. Yet in two other ways, this burial is different from the more than 85 Classic burials documented for the Ulúa River Valley. The body, an adult, was placed with arms and legs flexed, rather than extended. Included near the body were two pairs of obsidian bifaces, and a pair of vessels: a jar covered by a fragmented bowl.

Eight of the nine burials that were subsequently deposited in this platform were also accompanied by objects. Four contained juveniles, ranging in age from a very young infant to an estimated six to eight years. Two juveniles were buried with greenstone ornaments, and a third had a copper pendant. The fourth was buried with no preserved objects. The infant with the pierced copper pendant also had a reworked sherd disk and a small incised bowl. The three juveniles buried with objects were highly fragmented, and no burial position could be discerned. The fourth juvenile, an infant, was laid on their left side, head north, with their legs flexed, a position mirroring that of the adult in the earlier Burial 10, reversing the position of the head, as in Classic Ulúa burials. The flexed position of the Late

Classic Yojoa phase adult and the Rio Blanco phase child recalls the flexed position of the only burial reported from Early Postclassic El Coyote, north and west of Los Naranjos, where a juvenile, aged seven to nine, was interred without objects, head directed north (McFarlane 2005:537).

Five other Postclassic burials here contained remains of six adults. Every one of these burials was accompanied by either worked bifaces, worked bone, greenstone ornaments, pottery vessels, or a combination of these. Each burial assemblage was different. All of the vessels are Early Postclassic types, including the Las Vegas Polychrome type that replaced Ulúa Polychromes (Joyce 2019), and imported Tohil Plumbate and Mixtec censer vessels. The four best preserved burials showed that the bodies had originally been placed in a seated position.

This novel burial posture is seen at Postclassic Las Flores Bolsa as well (Table 5). Here, a total of 14 Classic and Early Postclassic burials were excavated. Detailed burial records include field assessment of age and sex (Kidder and Strong 1936). The latest three were described as “bundle burials” in the published preliminary report (Strong et al. 1938). One of these contained poorly preserved remains of a juvenile, partly covered by an inverted pot. The two others, both assessed as adult females, were definitely buried in a seated position, like the majority from Postclassic Los Naranjos. Each of the seated burials at Las Flores Bolsa was accompanied by unique burial goods (Table 5). The new seated posture was also used in the sole Late Postclassic burial known from the Ulúa Valley from El Remolino (CR-260). Described as an adult, the body wore a

**Table 5.** Postclassic burials

Site	Burial	Context	Position	Side	Facing	Body ornaments	Objects included	Notes	Source
Los Naranjos	Burial 1	T 51	seated		facing SE		obsidian point		Baudez and Becquelin 1973
Los Naranjos	Burial 2	T 51	disturbed				Las Vegas Polychrome jar Mirimpe Red ladle censer Mirimpe Red jar Tohil Plumbate vase Mixtec censer Custeca Plain jar	two crania; disturbed	Baudez and Becquelin 1973
Los Naranjos	Burial 3	T 51	seated		facing S	2 greenstone beads	Las Vegas Polychrome jar Las Vegas Polychrome dish		Baudez and Becquelin 1973
Los Naranjos	Burial 4	T 51	seated		facing S	2 greenstone beads greenstone mosaic fragments	3 obsidian blades Las Vegas Polychrome dish Las Vegas Polychrome dish worked bone fragment		Baudez and Becquelin 1973
Los Naranjos	Burial 5	T 51	partial			necklace of jade beads and pendant		infant, 6-8 years	Baudez and Becquelin 1973
Los Naranjos	Burial 6	T 51	partial			2 greenstone beads		infant, "very young"	Baudez and Becquelin 1973
Los Naranjos	Burial 7	T 51	flexed	left	head N			infant	Baudez and Becquelin 1973
Los Naranjos	Burial 8	T 51	partial			copper ornament	Cebadia Incised bowl reworked disk, Mirimpe Red	infant	Baudez and Becquelin 1973
Los Naranjos	Burial 9	T 51	seated		facing SE		worked bone		Baudez and Becquelin 1973
Los Naranjos	Burial 10	T 51	flexed	left	facing S		Ulua Polychrome bowl Masica Incised jar with <i>jutes</i> 4 obsidian bifaces	body N-S	Baudez and Becquelin 1973
Las Flores Bolsa	Bur A1	Exc 1 P4	seated		facing SE		3 spindle whorls stone object	adult female	Kidder and Strong 1936
Las Flores Bolsa	Bur A12	Exc 1 P6	seated				1 copper fishhook group of 4 obsidian blades group of 12 obsidian blades plain jar with turkey bones	adult female	Kidder and Strong 1936
Las Flores Bolsa	Bur A3	Exc 1 P6	secondary (bundle?)		facing S		inverted pot	juvenile	Kidder and Strong 1936
El Remolino (CR-260)	Bur 1	Op 1A (head), Op 1C-7 (body)	seated		facing WNW		2 Nolasco Bichrome dishes 1 obsidian blade 1 unslipped jar necklace of 68 spondylus shell beads	adult	Wonderly 1984; field notes

necklace of tubular spondylus shell beads (Wonderley 1984). Two vessels were placed below the seated body, both painted in the typical red-on-white style of the period, Nolasco Bichrome.

The provision of assemblages of objects returns to an earlier practice of individuation of burials set aside during much of the Classic period. The shift to seated posture at the transition from Classic to Postclassic period removed the possibility of orientation toward the horizon, making a sharper break with tradition than in the transition from Formative to Classic period. A similar shift in burial position is noted at the same time in Belize (Pendergast 1981).

Some materials included in these Postclassic burials suggest participation in new forms of ritual. Las Vegas Polychrome vessels and Nolasco Bichrome exhibit aspects of Mixteca-Puebla iconography, notably feathered serpent imagery (Joyce 2019; Wonderley 1985, 1986). This has been associated with a transcultural cult spread during the beginning of the Postclassic Period (Patel 2012; Ringle et al. 1998). While the use of incense-burning vessels had a long history in Honduras, the incense-burning vessel of Mixtec style buried with an individual at Los Naranjos is, similarly, an indication of an association with an international ritual practice.

The same may be true of the inclusion in one burial at Las Flores Bolsa of a pot containing turkey bones, unique in the Honduran zooarchaeological record (Henderson and Joyce 2004). Turkeys were an important part of ritual offerings recorded in Postclassic Yucatek Maya codices (Bricker 2007). Turkey bones were noted in burials at Postclassic Champoton (Götz et al. 2016:649). They were used in ritual practices at Postclassic Mayapan, including at oratories and freestanding shrines (Masson and Peraza Lope 2013). Some freestanding shrines at Mayapan incorporated secondary skeletal remains. Analysis suggests these individuals include a cosmopolitan population originating outside Mayapan (Serafin et al. 2014:160). Secondary burial practices likely also continued in Honduras, where excavations at El Coyote, west of the Ulúa Valley, yielded a likely secondary burial context, a single bone buried with two Tohil Plumbate vessels and shell and jade ornaments (McFarlane 2005:300–301; McFarlane 2024). Rather than simple continuity in a local Ulúa tradition, Postclassic mortuary practices suggest an alignment with a cosmopolitan ritual identity expressed in mortuary rites.

## Conclusion

The numbers of mortuary settings encountered in any one project are small. Our exploration of long-term regional patterning was only possible by combining information from heterogeneous sources, ranging from older unpublished field notes and brief publications, to more recently excavated and completely documented projects. The integration of different data sources allows a reconstruction of relatively stable practices in relation to the dead, with marked moments of change.

Initially treatment of the dead involved a cycle of moving remains from separate houses to collective ancestral caves. In house compounds, primary interments were personalized by

wearing ornaments and the inclusion of distinctive objects. As some, if not all, the buried dead were relocated to ancestral caves, these personalized accompaniments were left behind. A collective practice of burial feasting was recalled by the deposition of serving vessels in some caves.

After centuries of similar practices, mortuary treatment shifted to a valley-wide pattern in which primary interments were united in their original locations by axial orientation to an ancestral mountain. In Classic period burials the dead were undifferentiated except for age. A cycle of secondary mortuary treatments continued, now in performances within sites where bones were displayed and redeposited in new configurations. These recall similar practices in Classic Maya sites.

In the Postclassic period, cosmological unity in the valley was replaced by a new cosmopolitanism. Burials again individuated persons. Some late villages employed mortuary practices that may have become familiar through an extensive network linking nobles asserting common connections to supernatural beings (Patel 2012; Ringle et al. 1998). In these late burials, the dead were seated upright, aligning the body with the position of the sun at its highest point in the sky. This recalls the attempt made during the Classic period at one site, Travesía, to claim greater importance by adding solar alignments to traditional cosmological orientation to the ancestral mountain.

Over this long history, burial practices of the lower Ulúa Valley were coherent, although the region was never unified politically. The reproduction of practices points to a shared vision of the world, a philosophy, cosmology, or ontology that was resilient even in the face of confrontation with quite different visions of the place of humans in the cosmos held by neighboring peoples, as Maya and broader Mesoamerican elements were considered and selectively adopted. Layered memory was created through interment of both human bodies and meaningfully arrayed material culture. Memory was also created by disinterment and the afterlife cycles of humans as they transformed into ancestors via the transformation of bodies themselves (Lopiparo 2021).

Contrary to what might at first be assumed, it is not during the period when Classic Maya polities reach their greatest hierarchy that we see most engagement with practices originating in the Maya Lowlands. It is in the centuries equivalent to the Postclassic period that in the Ulúa Valley, participation in cosmopolitan rituals and social relations are reflected in changes in the treatment of the dead. We argue that throughout this long history, treatment of the dead was strategically manipulated by the living, in a ritualized tension between individualization and communal belonging that was the engine of social integration in the absence of overarching political authority.

## Spanish summary

Este artículo presenta un análisis de los entierros y prácticas mortuorias en el valle inferior del río Ulúa en la costa norte de Honduras, desde el Periodo Formativo hasta finales de la época precolombina. Con base en contextos excavados en el

sitio de Playa de los Muertos en la primera mitad del siglo XX y otros entierros encontrados en el mismo sitio en excavaciones más recientes, identificamos regularidades en el tratamiento de los muertos en el Periodo Formativo Medio (ca. 900–400 a.C.). Identificamos diferencias en el tratamiento de infantes y niños en contraste con los adultos. Sugerimos que los habitantes de la región practicaban un ciclo mortuario que iniciaba con el entierro cerca de la casa de su familia. Detectamos el uso de una orientación preferencial del cuerpo del difunto dirigido hacia una montaña sagrada al sur del valle. Sugerimos que la extracción de elementos óseos para depositarlos en cuevas en las montañas, previamente notada en varios estudios de Honduras, fue parte de la conmemoración de los difuntos como ancestros de familias, y contribuyó a las relaciones sociales que vinculan a los pueblos autónomos.

La importancia de las ceremonias mortuorias en la integración de comunidades independientes continúa en el Periodo Clásico. Nuestras muestras nos permiten comparar prácticas del Clásico Temprano (ca. 200–450 d.C.) y del Clásico Tardío y Terminal (ca. 450–950 d.C.). El tratamiento de los muertos sigue patrones anteriores, con concentración de entierros alrededor de las casas, continuación de la posición extendida como postura preferida, y la presencia de entierros de niños y adultos. El tratamiento de niños y infantes fue diferente al de los adultos. Un cambio muy marcado es el abandono de la práctica de incluir vasijas, ornamentos, y otros objetos en los entierros. Las orejeras de cerámica son casi los únicos objetos encontrados en los entierros del Periodo Clásico. Sugerimos que es una indicación de un énfasis en el grupo, más que la celebración de individuos típica del Periodo Formativo.

Las orientaciones de los cuerpos de los difuntos hacia puntos de importancia cosmológica en el paisaje continuán. La muestra más grande, del Periodo Clásico Tardío, muestra que en cada sitio, la mayoría de los entierros estaban orientados hacia la montaña sagrada, o perpendiculares a ella, con un ángulo diferente utilizado en cada sitio para lograr uniformidad en la orientación. Sugerimos que se trata de un culto compartido a los muertos, asociándolos con los ancestros en la montaña. Un cambio con respecto al periodo anterior es la adición de una orientación alternativa, hacia el punto en el horizonte oriental donde aparece el sol en el solsticio del invierno. Sugerimos que esto es una indicación de cambios en la cosmovisión, con énfasis en el sol.

El entierro formaba parte de un complejo de prácticas de deposición estructurada en el ciclo de vida de las casas, junto con los depósitos de objetos y huesos humanos extraídos de los entierros. Bultos de huesos son sujetos del arte contemporáneo de la zona. La fragmentación de un cuerpo completo, humano o otro, y la extracción de elementos para su conservación o deposición en otros lugares, fue una parte repetida de los eventos que produjeron los depósitos estructurados.

La muestra de sitios identificados para el Posclásico es menor, pero provienen de contextos mortuorios que indican cambios en prácticas muy importantes. La práctica de incluir objetos en el entierro resume, una indicación de un

mayor interés en la identidad individual. La postura preferida cambia: la mayoría de los entierros del Posclásico están en una postura sentada, con la cabeza orientada hacia el cielo—tal vez una indicación de un aumento en la importancia del sol en la religión.

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