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The Inscribed Weaving Pins of Buenavista del Cayo, Belize

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Although bone implements were commonly used by the ancient Maya, bone objects represent one of the rarer classes of artifacts recovered in archaeological excavations. Once in a while, however, a set of bone objects are found together, which are of such exceptional quality that these demand further examination. It is precisely on one such set that we focus here, introducing the carved and inscribed weaving implements that were found in a Late Classic Maya tomb at the site of Buenavista del Cayo, in Belize. We first provide a précis of the archaeological context, associated finds, and the dating of these materials, before going on to present analogous specimens found across the Maya lowlands. Thereafter we provide descriptions of these weaving pins and examine their glyphic texts, before concluding with a discussion of royal household economies and gender bias regarding textile production in the Classic period.

Context and Background

The implements that constitute the focus of this paper were found in a tomb during excavations in 1988 at the site of Buenavista del Cayo in central Belize, located close to the modern Guatemalan border and no more than 14.4 km east of Naranjo, the nearest superordinate site. The burial (BV88-13) had been placed intrusively in

the core of Structure 1, the site's large pyramidal structure, rising some 24 m above the central plaza (Figure 1). This context was affected in antiquity by reentry and the deposition of later interments; sadly, much of the original arrangement of this burial was marred by these activities. Without wanting to complicate events unnecessarily, it would seem that the ancient intrusions into this burial resulted in both the removal as well as the addition of artifactual materials, with ceramic vessels within the burial being smashed and scattered across the tomb (for a detailed overview of these contexts see Ball and Taschek 2018). Despite these disturbances, Burial BV88-13 was determined to contain an adolescent (around 13 years of age) of indeterminate sex as the primary occupant (see Mitchell 2006:54-55). As is typical of central Belize, the skeleton was buried in an extended position with head to the south (Figure 2). Traces of textiles saturated with red pigment and encased within wet plaster indicate that the original burial was cocooned within a plaster-lined shroud, placed inside a beehive-shaped vaulted tomb (Ball and Taschek 2018:485). In addition to a fine set of jadeite earflares, and numerous greenstone beads, chert implements, and obsidian blades, large spiny oyster bivalves (*Spondylus* sp.), and pearls all of which were drenched in red cinnabar, the tomb

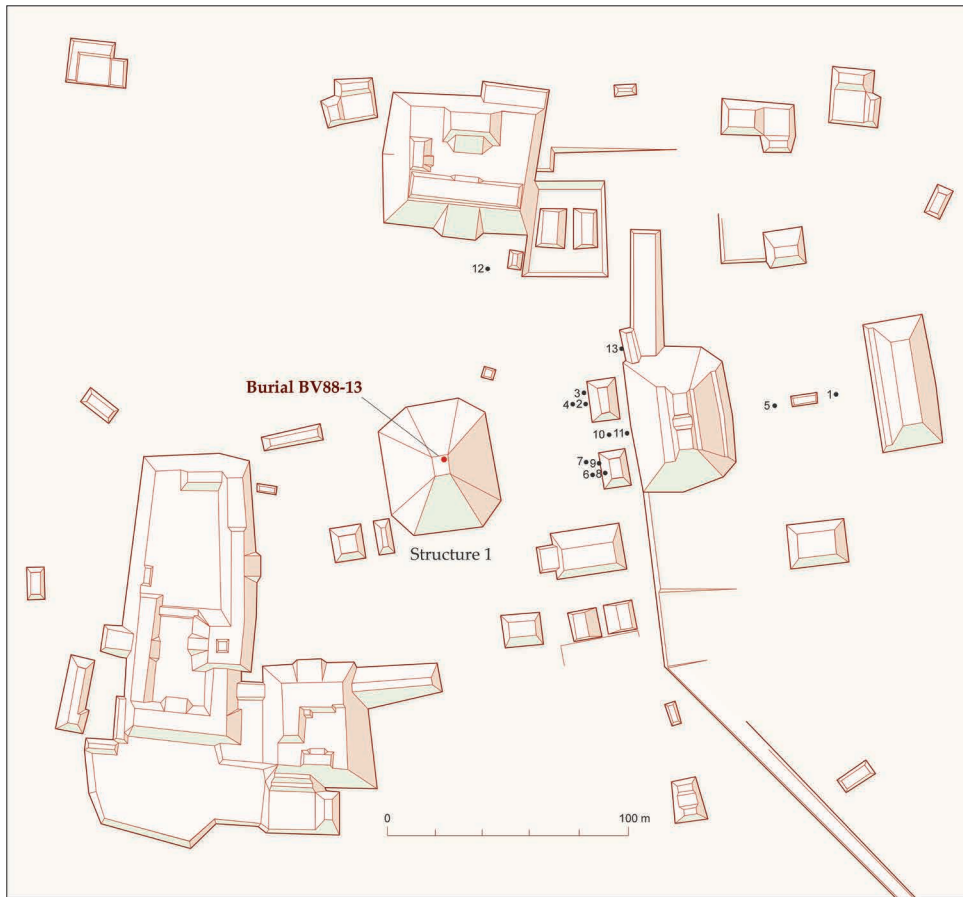


Figure 1. Plan of the monumental architecture of Buenavista del Cayo, showing the location of Structure 1 and the placement of Burial BV88-13 (map by Christophe Helmke, based on maps by the MMT and MVA projects).

were added to the burial. Given that the atole vessels name the then-reigning monarch of Naranjo, this demonstrates ties between the two sites. As we will see, there is also additional evidence linking the interred individual of BV88-13 to the court of Naranjo.

The reentry and resealing event likely took place sometime between AD 775 and 785, a time when Naranjo was reasserting its power in central Belize. The AMS radiocarbon age for this event obtained from the charred copal and breadnuts is AD 1180 \pm 30 (Beta-481543) with an interpolated CALIB rev. 8 highest probability 2 σ HPD interval of cal. AD 770–900 (Bayesian credible interval 0.9136) and a highest probability 1 σ HPD interval (0.6442) of cal. AD 775–845.

A second AMS determination on charred chips and splinters scattered about the bottom of the crypt provided a radiocarbon age of AD 1310 \pm 30 (Beta-445404) with an interpolated CALIB highest probability 2 σ HPD interval of cal. AD 655–725 (Bayesian credible interval 0.7193) and a highest probability 1 σ HPD

¹ This name has otherwise been read as K'ahk' Kaloom Chan Chahk (compare Martin and Grube 2000:80–81 with Helmke et al. 2020:2). However, given that all known examples are written K'AK' KAL CHAN-na cha-ki (St 6, St 13 back) and K'AK' KAL CHAN-na CHAK (St 19, K7750) without either an explicit pronominal *u-* or any indications of suffixation on *kal-*, we suggest that the verb was likely an abbreviated antipassive—i.e., *kal[oon]* or *kal[aaŋ]*.

² The ceramic vessels originally placed within the burial may have been collected from the wreckage of Structure 21-1st, Buenavista's late Early through Middle Classic palace, demolished and burned in the terminal seventh century (Ball and Taschek 2018)

also contained a range of high quality ceramic vessels of Late Classic date (Ball and Taschek 2018:485–486). These included a pair of partial fluted redware vases (Tolla Fluted, English Red Ware), four polychrome tripods of exceptional quality that were nested within each other in pairs (Benque Viejo Polychrome), and three atole dishes, each bearing a single large glyph of nominal character (Medallón Black-on-orange) (Figure 3). Whereas their nature was not initially clear, two of them feature the portrait glyph featuring an axe-wielding aspect of the thunder god Chahk, here serving as the logogram **KAL**. Prefixed to the portrait glyphs are stylized volutes of flames, which serve to render the logogram read *k'ahk'* 'fire.' Taken together, these may well provide, in abbreviated form, the regnal name of Naranjo's eighth-century monarch, K'ahk' Ukalaw Chan Chahk.¹ Based on the monuments of Naranjo, we know that he came to power in AD 755 and that his reign lasted until at least 780 (Grube 2004:204–205; Martin and Grube 2000:80–81). It is particularly noteworthy that the dates for K'ahk' Ukalaw Chan Chahk's reign neatly coincide with radiocarbon determination obtained from a small, compact deposit of charred copal (*Protium copal*) and breadnut (*Brosimum alicastrum*) believed to be an offering associated with the reentry of Structure 1 and the disturbance of Burial BV88-13. The ceramics originally accompanying this burial were very simple and may have consisted only of monochrome vessels; these included three plain orangeware dishes (Chunhuitz Orange), the two aforementioned fluted vases, and a Belize Red dish (Ball and Taschek 2018:Fig. 12h–k).² We suspect that it is during the reentry, displacement, and refurbishment of Burial BV88-13 that the three Medallón atole dishes and four Benque Viejo Polychrome tripods

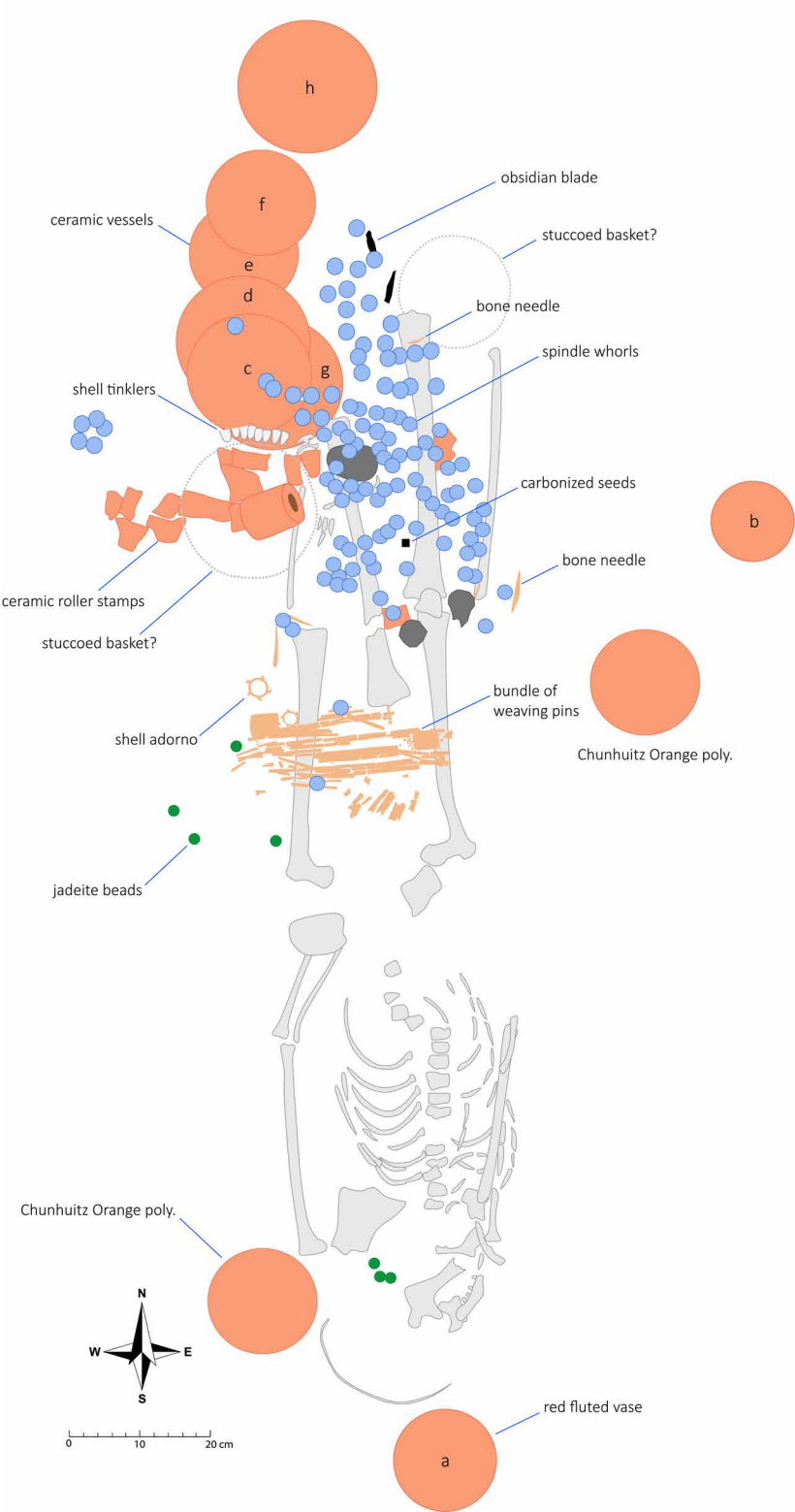


Figure 2. Plan of Burial BV88-13 showing the major features and the location of the artifacts, ceramic vessels, roller stamps, and the numerous spindle whorls (in the northern part of the burial), as well as the bundled bone implements across the legs of the interred (plan by Jennifer Taschek and Christophe Helmke). Lettering of the ceramic vessels corresponds to those indicated in Figure 3.

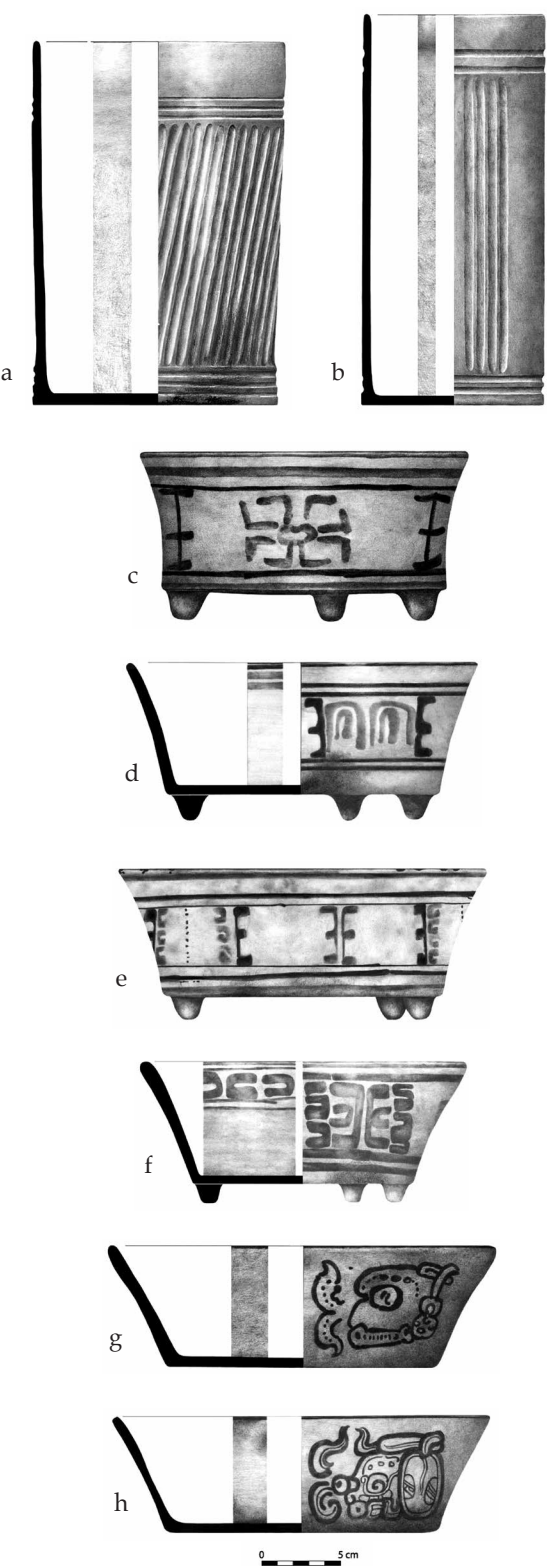


Figure 3. A selection of ceramic vessels found within Burial BV88-13: (a–b) Tolla Fluted vases; (c–f) Benque Viejo Polychrome tripods; (g–h) Medallón Black-on-orange dishes bearing nominal glyphs (drawings by Jennifer Taschek).

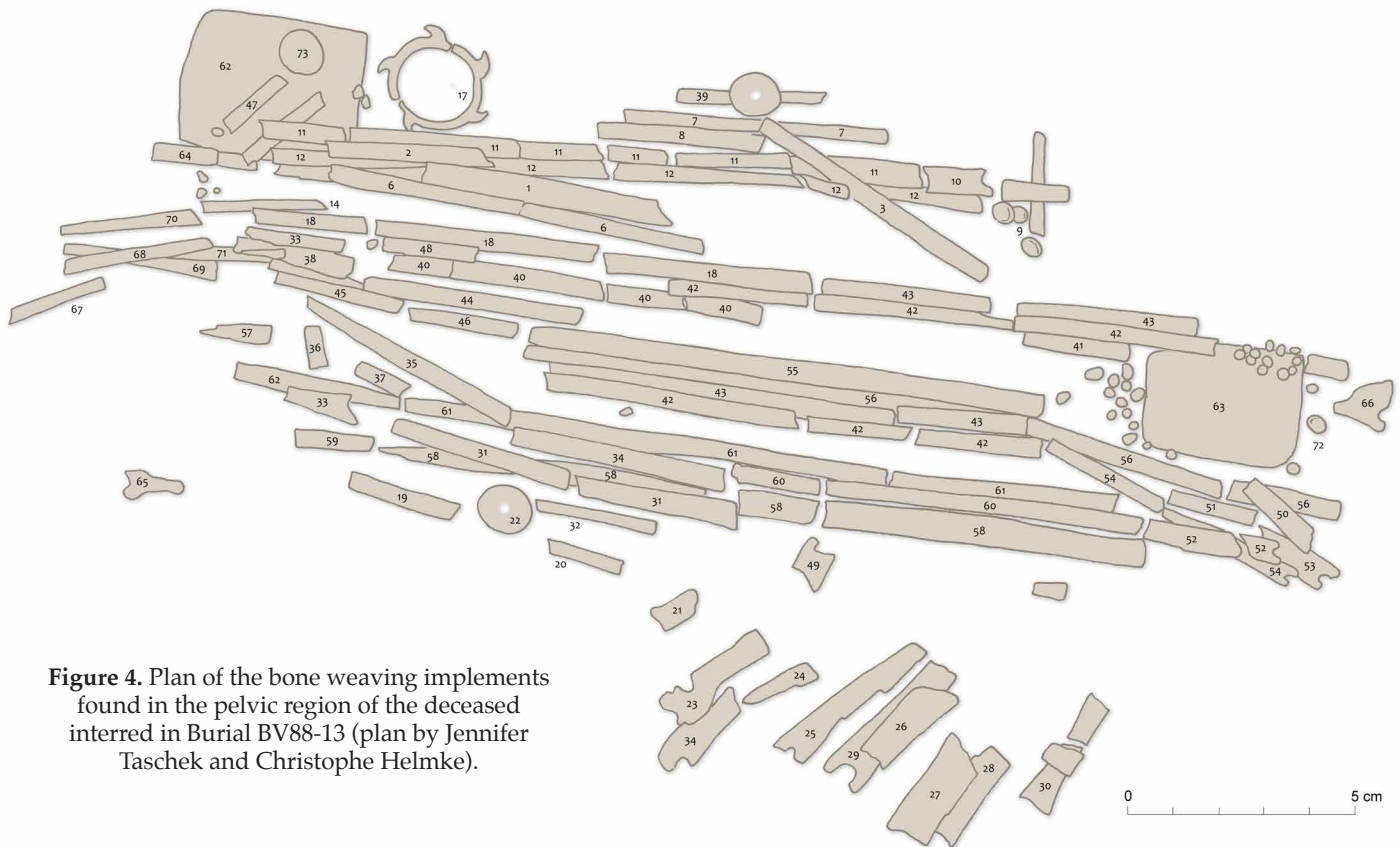


Figure 4. Plan of the bone weaving implements found in the pelvic region of the deceased interred in Burial BV88-13 (plan by Jennifer Taschek and Christophe Helmke).

interval (0.7015) of cal. AD 665–710. This date is in close agreement with others obtained from the burned ruin of Structure 21-1st (see Ball and Taschek 2018:478, Table 1), and we believe that it is also the approximate time of the death and burial of the young occupant of BV88-13; that is, near the close of the seventh century or perhaps the very early years of the eighth. A bundle of bone weaving pins (to which we return below) were most likely placed in the burial at this time, during the regency of Lady Six Sky (AD 682–741) and the reign of her son, K’ahk’ Tiliw Chan Chahk (r. AD 693–728+) (Grube 2004:200–202; Helmke 2017; Martin and Grube 2000:74–77).

Of particular interest is a grouping of objects found in the northern portion of the burial, placed around the severely deteriorated lower limbs of the deceased (Figure 2). These objects comprised a functional set of spinning and weaving implements, including as many as 110 stone spindle whorls (which may originally have been fastened to a larger perishable object), five eyed bone needles, three cylindrical textile roller stamps (originally kept within a stuccoed basket), and the fragmentary remains of at least nineteen bone weaving pins, placed together as a bundle across the legs (Figure 4). What is truly remarkable about these intricately carved and painted implements is that the proximal ends of at least ten of these were engraved with short glyphic texts. It is on these weaving implements that we will

focus in this paper, examining their glyphic texts and comparing them to analogous specimens from across the Maya lowlands.

Comparable Specimens

Similar weaving pins have been found at a number of sites across the Maya lowlands, often found in association with spindle whorls, awls, and needles (e.g., Chase et al. 2008:128). These include an infamous set of 24 inscribed weaving pins and 15 additional fragments from a special deposit at Naranjo, which made their way into the illicit antiquities market in the late 1990s (Dacus 2005). Justin Kerr photographed these objects, and epigrapher David Stuart was the first to note that most of them were inscribed with name tags, self-referentially identifying the bone pins and their original owners (Houston and Stuart 2001:64–65). Some of these pins were inscribed with the name of the lady Ix Ayaatz or Ix Ayatziiy, although most belonged to Ix Yohl Ch’een of the Holmul region (Dacus 2005:58–96). These incised texts usually refer to the bone pins as *u-puhtz’* ‘it is her needle’ [Bones 2, 3, 6, 7, 9, 10, and 20] (Figure 5a–b) or, somewhat less frequently, as *u-baak* ‘it is her bone’ [Bones 1, 8, 11, and 12] (Figure 5c–d; see Houston and Stuart 2001:64–65; Dacus 2005:60). One particularly fine example contains a dedicatory phrase of four glyphs

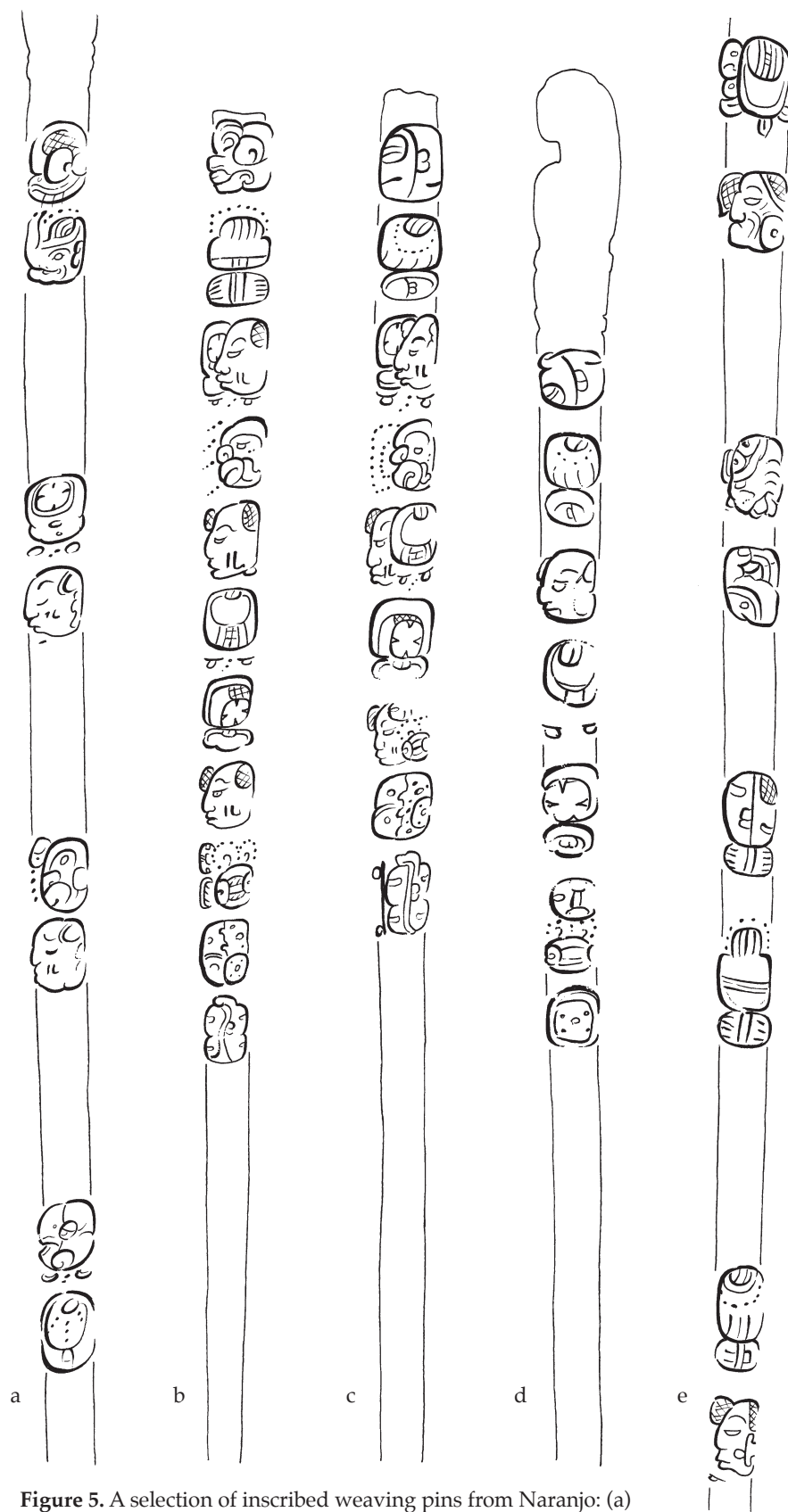


Figure 5. A selection of inscribed weaving pins from Naranjo: (a) Bone 3; (b) Bone 9; (c) Bone 8; (d) Bone 12; (e) Bone 5 (drawings by Christophe Helmke, based on photographs by Justin Kerr).

(*ayal t'abaay jich*), parallel to the so-called Primary Standard Sequence (PSS) well known from ceramics, followed by the more complete name tag **u pu-tz'i ba-ki**, *u-puhtz'-baak*, 'it is her needle-bone' (Figure 5e), which only appears on two of the bones in this set [Bones 4 and 5].³ Evidently, the common element in all of these labels is *puhtz'* and, based on context, this is undoubtedly the chief designation for these weaving pins.⁴ Reflexes of this term are widespread among the lowland Mayan languages (see Table 1).

As can be seen, two of these forms—Ch'olti' <putz bac> and Yucatec <puts' bak>—were recorded without such niceties as tone, vowel length, and/or glottalization. We include them to illustrate that this term was nonetheless present in at least one Eastern Ch'olan language (i.e., Ch'olti'), and also because they provide a useful indication that *puhtz' baak* was indeed an expected nominal compound, and one that was sufficiently widespread to appear in both northern Yucatan and the Manche Ch'ol region of southeastern Guatemala and southern Belize. Given the shared high-tone of Yucatec and Lacandon *piutz'*, as well as the shared long-vowel of Itza' and Mopan *puutz'*, both of which stem from the loss of post-vocalic *h* (Hironymous 1982:10-13), we can reconstruct Proto-Yucatecan **puhtz'*. Since post-vocalic *h* was in turn retained in Eastern Ch'olan languages,

³ Bone 5 has an unusual spelling that deserves some comment. As written, the self-referential segment can be transcribed as **u-tz'i pu-tz'i ba-ki**, wherein the first syllabic sign **tz'i** is evidently superfluous. We surmise that this was a spelling mistake, where in the first instance the intended **pu-tz'i** suppressed the phonogram **pu**. Close inspection of the object by Zender shows that the lateral horizontal lines in the **tz'i** sign below the **u** were crossed out by vertical strokes, as if to cancel this sign, and form a larger, more complex **u** sign.

⁴ The *puhtz'* term was first identified by Karl Taube (in Houston and Stuart 2001:64-66 and 77, n. 5) on an inscribed weaving pin from Zibilchaltun, to which we return below.

Chontal	<i>putz'</i>	'aguja'	Keller and Luciano 1997:199, 311
Ch'olti'	<putz bac>	'abuja [sic], de hueso'	Morán 1695:82, line 9
Yucatec	<puts' bak> <i>púutz'</i>	'aguja de hueso' 'needle'	Barrera Vásquez 1980:678 Bricker et al. 1998:222
Lacandon	<i>púutz'</i>	'aguja, alfiler'	Hofling 2014:271
Itza'	<i>puutz'</i>	'aguja'	Hofling and Tesucún 1997:529
Mopan	<i>puutz'</i> <i>puutz'</i>	'aguja, jeringa' 'aguja'	Ulrich and Ulrich 1976:164 Kaufman 2003:361

Table 1: Reflexes of the term **pu-tz'i** in lowland Mayan languages.⁵



Figure 6. Modern use of weaving pins among traditional Maya weavers in the highlands of Guatemala (San Antonio Aguas Calientes). Master weavers Esperanza Pérez using (a) a wooden weaving pin to brocade a complex design and (b) separating warfts into equal sets; and Graciela Godínez de Hernández using (c) a bone weaving pin, in shape of a bird; (d) close up of brocade work (video stills from Mossman Vitale 2005 and 2009).

we propose that the colonial Ch'olti' term would have been vocalized as *puhtz'* *bak* and that the Classic period form in the southern lowlands would also have been *puhtz'*. Its form indicates a likely nominalization (via *-h-*) from an otherwise unattested verb **putz'*, parallel to other script nouns such as *koht*, *mahk*, *muhk*, and *wahy* (see Stone and Zender 2011:233, n. 7; Zender 2006:6-7, n. 10).

By considering the glyphic texts inscribed on these artifacts, we can usefully establish that they were in fact conceptualized as 'bone needles.' That said, it may be better to consider them as weaving pins given their considerable size, and that they were most likely used to add complex designs in the weft of the back-strap loom. Very similar pointed picks (Figure 6), fashioned from both wood and bone, continue to be used by modern Maya weavers in

the highlands of Guatemala and Chiapas, where they are employed to introduce complex brocade patterns, or to separate warp yarns into sets for the addition of colorful hand-knotted weft patterns (see Anderson 1978:Fig. 109; also McKay and Lipke Vigessaa 1993). Although these objects have often been misidentified in the archaeological literature as everything from decorative hairpins to bodkins, they are better understood as weaving pins, given their inscriptions, their forms, and the fact that the pointed ends of these objects are highly polished, indicative of extensive usage, in keeping with their modern analogs.

Without wanting to present a comprehensive account, such pins have been discovered far and wide across the lowlands. One of the earliest inscribed examples was discovered in the 1960s at Dzibilchaltun (Taschek 1994:105-106), which states that it is a *puhtz' baak* belonging to *Ix Tz'unun* 'Lady Hummingbird,' a *lek ixik* 'good woman,' and *Tijo' ixik* 'Dzibilchaltun woman' (Figure 7a). At the site of Altun Ha, a bird-topped pin bears a highly abbreviated glyphic label which can nonetheless be made out as a *puhtz'* belonging

⁵ For an earlier overview of cognates, see Lacadena and Wichmann (2004:154).

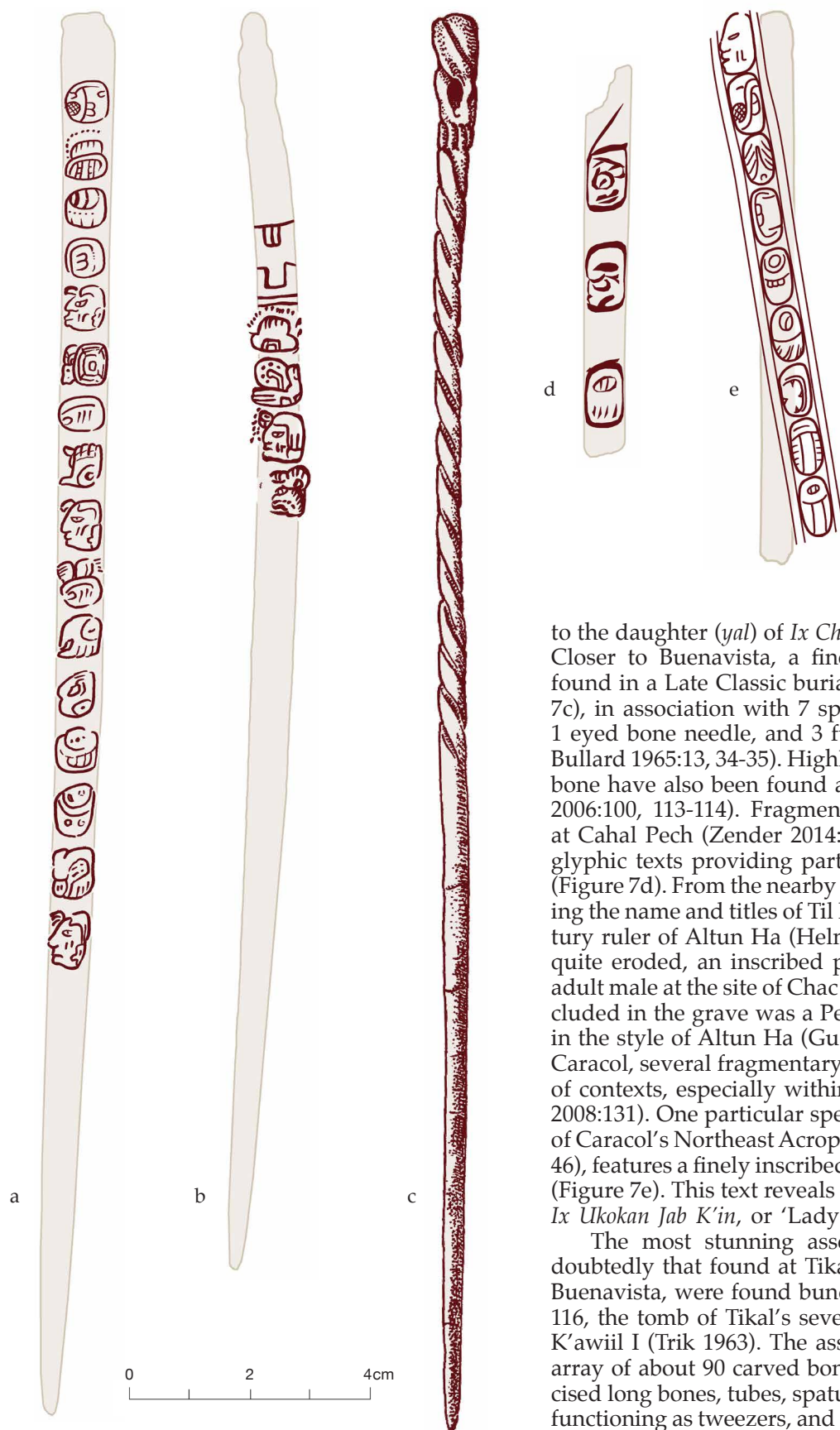


Figure 7. Comparison to a selection of weaving pins from different archaeological sites: (a) Dzibilchaltun; (b) Altun Ha; (c) Baking Pot; (d) Altun Ha; (e) Caracol (a, b, d, e drawings by Christophe Helmke, based on photographs by Merle Green Robertson, Christophe Helmke, and Arlen Chase; c after Bullard and Bullard 1965:Fig. 15k).

to the daughter (*yal*) of *Ix Ch'o'(?)* 'Lady Mouse(?)' (Figure 7b). Closer to Buenavista, a finely gadrooned weaving pin was found in a Late Classic burial at the site of Baking Pot (Figure 7c), in association with 7 spindle whorls, 1 slotted bone tool, 1 eyed bone needle, and 3 further weaving pins (Bullard and Bullard 1965:13, 34-35). Highly polished examples made of deer bone have also been found at the site of Pook's Hill (Stanchly 2006:100, 113-114). Fragmentary specimens have been found at Cahal Pech (Zender 2014:59) and at Altun Ha, with partial glyphic texts providing part of the usual name tag, *u-ba(-ki)* (Figure 7d). From the nearby site of Chau Hiix comes a pin bearing the name and titles of Til Man K'inich, the exalted sixth-century ruler of Altun Ha (Helmke et al. 2018:120-121). Although quite eroded, an inscribed pin was found in the burial of an adult male at the site of Chac Balam on Ambergris Caye, and included in the grave was a Petkanche Orange-polychrome vase in the style of Altun Ha (Guderjan 2004:99, Fig. 4b). Finally, at Caracol, several fragmentary pins have been found in a variety of contexts, especially within the site's epicenter (Chase et al. 2008:131). One particular specimen, found in architectural core of Caracol's Northeast Acropolis (Chase and Chase 2015:15, Fig. 46), features a finely inscribed text that winds around its surface (Figure 7e). This text reveals that its original owner was named *Ix Ukokan Jab K'in*, or 'Lady stingray spine of the open sun.'

The most stunning assemblage of carved bones is undoubtedly that found at Tikal, which much like the context at Buenavista, were found bundled at the southern end of Burial 116, the tomb of Tikal's seventh-century monarch Jasaw Chan K'awiil I (Triak 1963). The assemblage consists of a remarkable array of about 90 carved bones, ranging from polished and incised long bones, tubes, spatulate implements, composite forms functioning as tweezers, and a broad set of weaving implements



(Moholy-Nagy 2008:61-62; Trik 1963:11-18). All of these are wonderfully shaped and embellished with carvings, highlighted by the application of red cinnabar. Some of the bones represent captives, and we are left to surmise whether these depictions may have been rendered on the bones of the captives themselves. Other bones provide extensive necrologies, recording a list of dead royals and the dates of their passing (see Houston 1993:99, Fig. 4-2). In addition to providing mythological scenes involving the thunder deities out on a fishing trip (Stone and Zender 2011:41, 129), and the death and demise of the Maize God ferried out on a canoe (see Zender 2020), the inscribed weaving pins form a distinctive set among these carved bones.

The subject matter of these pins ranges from historical events of the distant past, such as the *ehmey* 'descent' or 'departure' of Yax Nuun Ahiin I from Teotihuacan in the fourth century AD (Figure 8a), or the *tzak waxaklajuun ubaah k'awiil* 'conjuring of (the) eighteen-headed serpent' deity of Teotihuacan (Figure 8b). Other pins provide counts of time in impressively large cycles of 11 Baktun (corresponding to more than four millennia apiece), in order to construct the concept of time eternal (Figure 8c). At their most prosaic, the bones provide a simple name tag, initiated with the customary *u-baak*, 'it is his bone,' before going on to name the original owner as Jasaw Chan K'awiil I (here using his funerary name Jasaw (?)T'ochwaan), with the captions closed by parentage statements naming his mother as Lady Tz'am and his father as Nuun Ujol Chahk (Figure 8d-e).

Figure 8. A selection of weaving pins from the burial of Jasaw Chan K'awiil at Tikal (Bu. 116): (a) MT35; (b) MT33; (c) MT26; (d) MT43; (e) MT44 (drawings by Christophe Helmke, after Moholy-Nagy 2008:Figs. 194e-f, 195c, e, 196a). Largest pin measures 24.5 cm in length.

The Weaving Pins from Buenavista del Cayo

As curated and restored, the bundle from Burial BV88-13 was found to contain as many as nineteen separate bone weaving pins (Figure 9). Ten of these were inscribed with short glyphic texts, whereas the remainder were left uninscribed. The incised texts were highlighted with red pigment (hematite powder) to enhance their legibility, and the heads of the pins were all embellished with carved heads, rendered in profile. Most of these appear to render deities, but in at least two cases the ends are decorated with human hands (this type of decoration was also seen in the set of weaving pins from Naranjo, introduced above). Two of the pins have small bone insets at the end, apparently to serve as tweezers, in keeping with analogous compound bone implements found at Tikal (see Moholy-Nagy 2008; Trik 1963). The decorative ends of the bone pins found at Buenavista were all painted with vivid blue and red pigments, and small decorative bands of thinly applied gesso were also painted in blue towards the ends of the shafts. In antiquity, these weaving pins must have been an incredible sight, given their bright and detailed decorations. The deities that adorn the pins include K'awiil, the embodiment of lightning as royal power (Stone and Zender 2011:48-49), as well as Sak Hunal, the personification of paper crowns used in royal accession ceremonies (Stuart 2012). These are very important and highly charged supernatural entities, which make a bold statement about the individuals wielding these pins, and it may have been thought that supernatural entities imbued textiles with considerable royal power.

From the six complete weaving pins, we can see that they range in length between 17.3 and 26.1 cm (with the average measurement at around 22.4 cm). The decorative, figurative ends measure between 0.9 and 1.2 cm in width, terminating in pointed and polished tips at the opposite ends. The size of the glyphs is another feature of note, which is all the more surprising, as these measure no more than 10 mm high and between 6 and 7 mm wide. This reveals just how amazingly small and detailed these objects are, and speaks to the incredible skill of the scribe: the style of the glyphs, with varying depth and width of relief, reveals true calligraphic refinement. Without a doubt, these are the products of a master scribe.

Based on the glyphic texts incised on the bone pins, they can be divided into three groups. All of the inscribed texts start with a caption, referring to the objects themselves. Without fail, the caption is **u-ba-ki**, *u-baak*, 'it is her bone.' There is some variety in the use of the initial **u** sign, which ranges from a relatively squat form representing a rather stylized olla (compare the fifth glyph block on the aforementioned Figure 5e, as well as the first glyphs on Figures 5c-d and 6a), to a figurative head-variant, rendering the stylized head of a shark (as in the first glyphs on Figures 5a-b). Despite these

graphic variations, these are all well-known variations of the phonetic sign **u** (see Stuart 1990).

The first set of bones [Bones 1 and 2] then goes on to name the original owner (Figure 10a-b). This is divided into two sets of two glyph blocks: the first pair provide the proper name; the second pair provide the owner's title, in keeping with the expected syntax of Classic Mayan. It is interesting, in fact, how the more complete glyphic text on Bone 1 is divided neatly into three sections, each providing a different syntactical unit (1: possessive declaration of object, 2: name, and 3: title). This indicates that the individual who engraved these glyphs was well aware of these syntactical parameters. The title of the first set is clearly written as **IX SAK-CHUWEN**, providing the female version of the dynastic title of Naranjo, Sak Chuween. Based on our understanding of this title, this qualifies the nobility of Naranjo as 'Pure Artisans' and refers to their artistic abilities, their patronage of and affinity to the arts (Closs 1984:80, Fig. 2, E10; Reents 1986:155). As such, the first set of bone pins was once owned by a noble lady from the Naranjo royal house. Her name is recorded in the two intervening glyphs, and although these are only partially preserved, comparing the two bone pins we can transliterate her name as **IX i-chi-ni**, for *Ix ichin*, or 'Lady *Ichin*.' Unfortunately, the name is previously unattested, and *ichin* is an exceedingly rare if not unique noun. On the one hand, it may be cognate with a term found in the Madrid Codex, **i-ki ku-yu**, presumably an abbreviation of *iki[n] kuy*, 'ikin owl' (see Boot 2009:74).⁶ Alternatively, it may be related to the sparsely-attested term *ichiiy* 'egret'.⁷ As such, the original owner of these bone pins was therefore named either 'Lady Owl' or 'Lady Egret,' and was apparently a Naranjo noblewoman.

The second set of weaving pins [Bones 4 and 5] are now only partly preserved, but originally provided short texts of four glyphs, divided into two halves (Figure 10c). Again, the initial portion provides the possessive construction *u-baak* 'it is her bone' and the second segment jumps straight to the titular segment of the original owner. From what we can tell, this was written as **IX-9 [CHAB-la]AJAW**, or *Ix Baluun Chabal Ajaw*, perhaps for 'Princess of Nine-Lands.' This titular segment thereby provides a title of origin, stating that she hailed from a place called *Baluun Chab*, here with the toponym receiving the attributive suffix *-al*, denoting its

⁶ The Madrid reference would seem to refer to some kind of owl, as also suggested by Lacandon *ikim* 'búho' and Tzotzil *ichin* 'owl' (see Kaufman 2003:611).

⁷ The lexeme *ichiiy* is presently attested in only three contexts at Yaxchilan and Palenque: (1) Aj Saak Ichiiy Pat (YAX L.44, A4); (2) Yohl Mat Ichi(iy) Baak (PAL T.XIX Bench, South, Q-S), and (3) Ahkal Ichiiy (PAL T.Cross, West Sanctuary Jamb). Stuart (2005:114-115) has suggested that these refer to some kind of waterfowl, such as an egret, stork, or heron—cf. Tzeltal *ichil mut* 'garza' (Polian 2018:261) and Tzotzil *ichi* 'egret, stork' (Laughlin 1988:108).

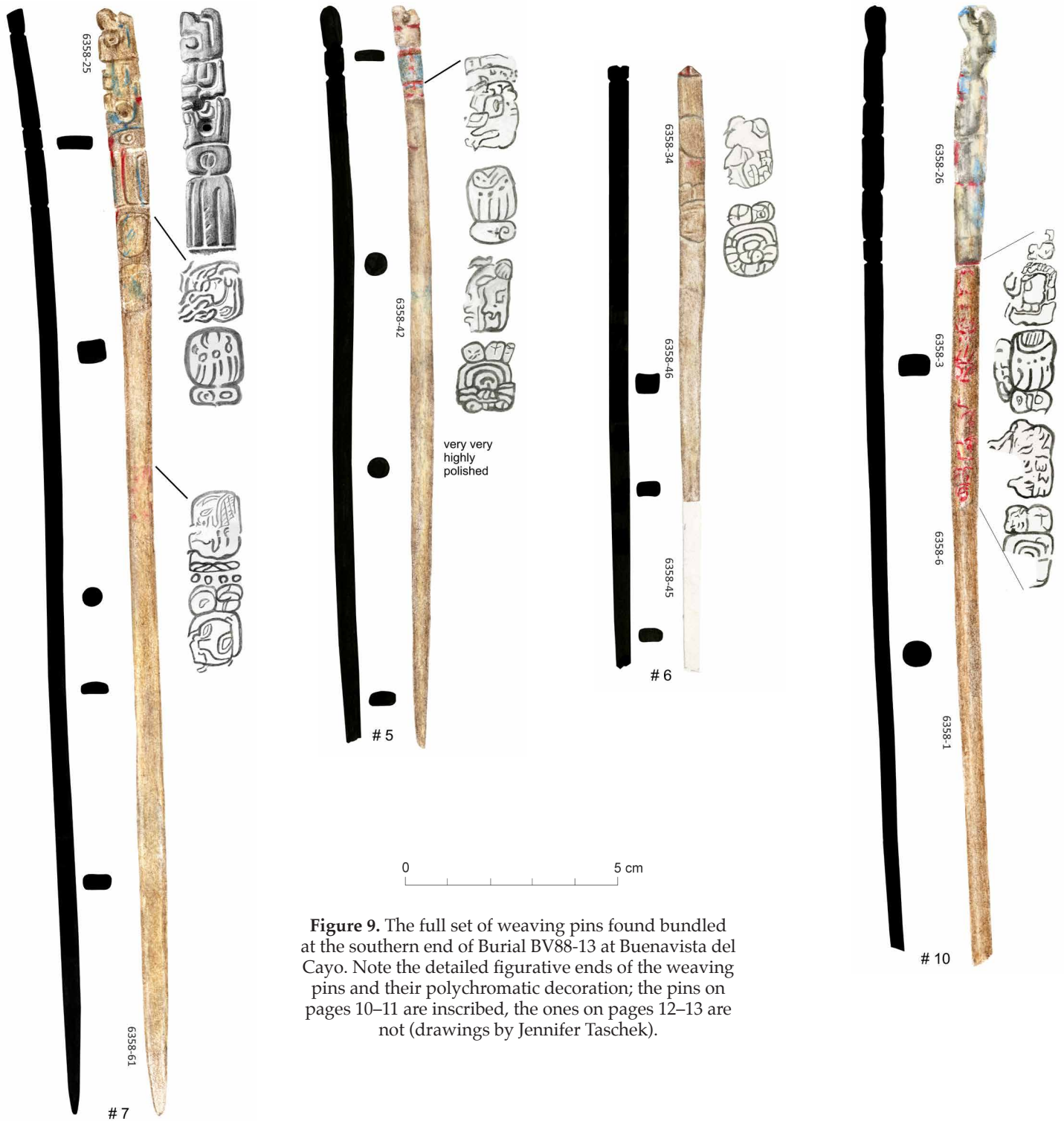
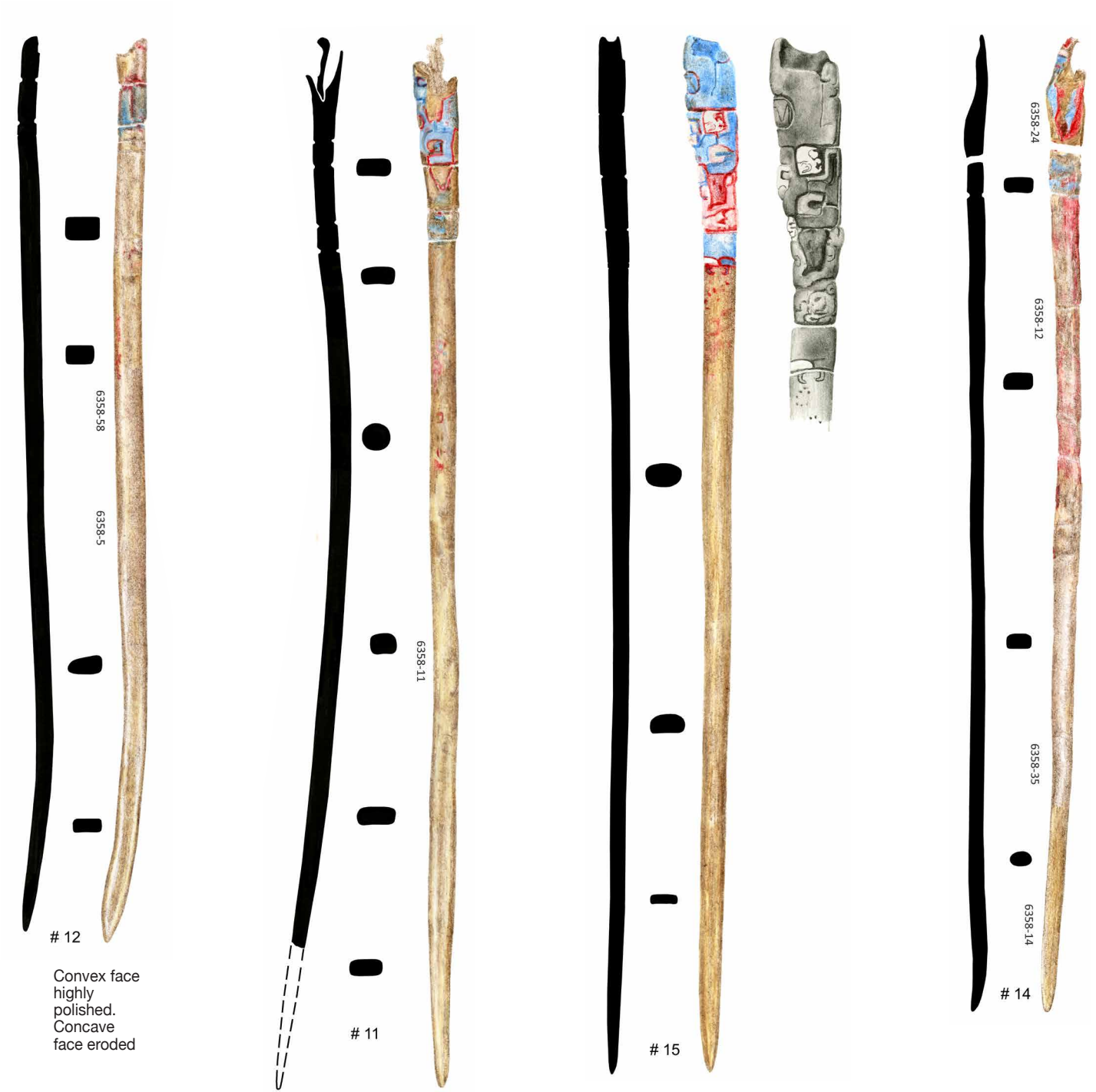


Figure 9. The full set of weaving pins found bundled at the southern end of Burial BV88-13 at Buenavista del Cayo. Note the detailed figurative ends of the weaving pins and their polychromatic decoration; the pins on pages 10–11 are inscribed, the ones on pages 12–13 are not (drawings by Jennifer Taschek).





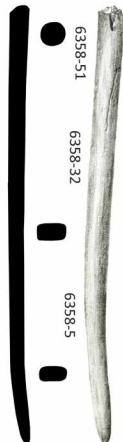
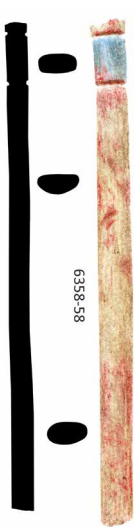
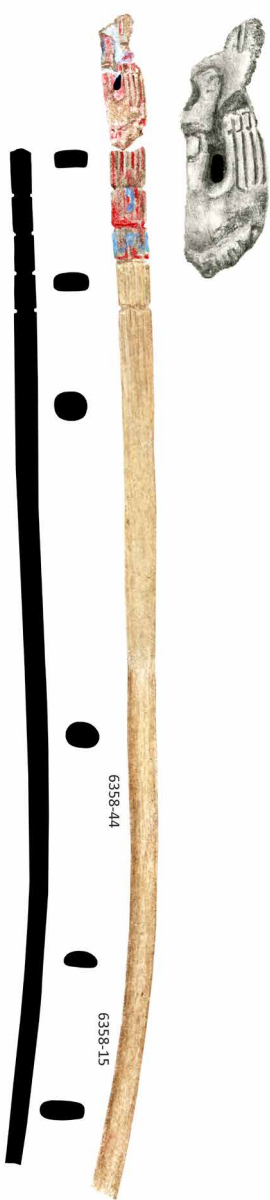
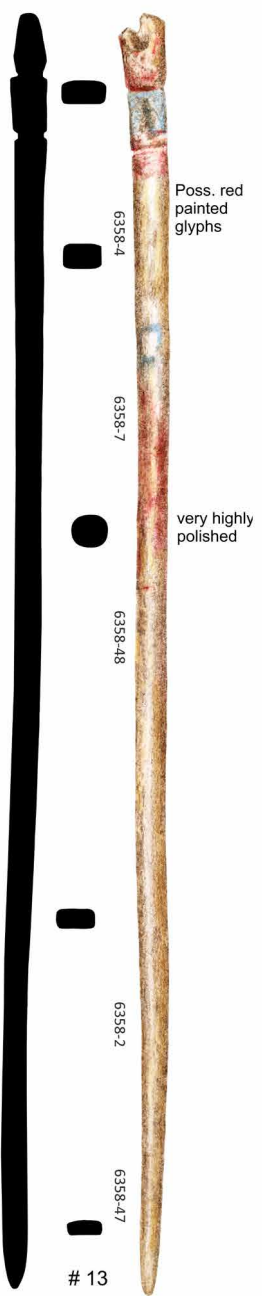
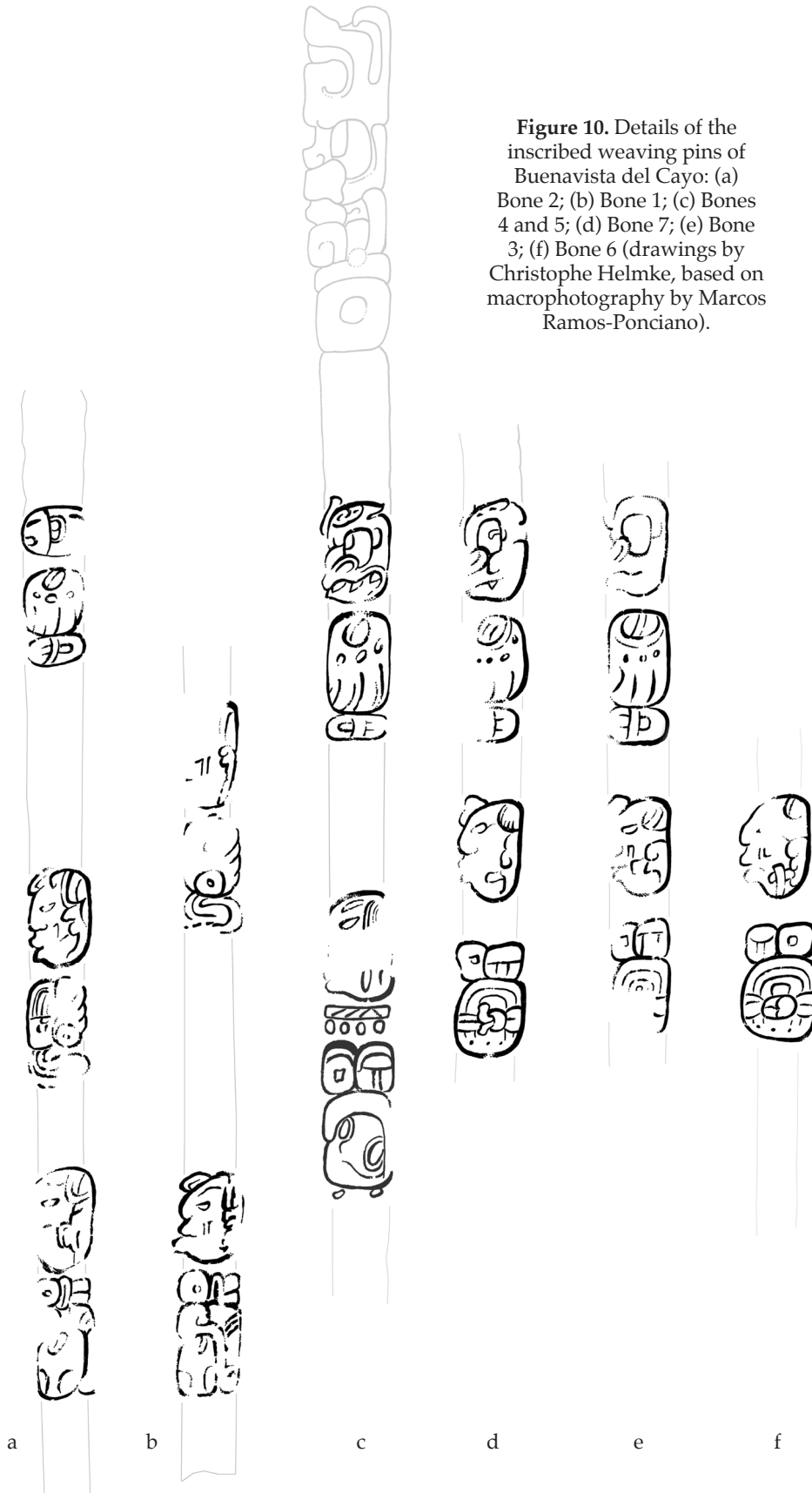


Figure 10. Details of the inscribed weaving pins of Buenavista del Cayo: (a) Bone 2; (b) Bone 1; (c) Bones 4 and 5; (d) Bone 7; (e) Bone 3; (f) Bone 6 (drawings by Christophe Helmke, based on macrophotography by Marcos Ramos-Ponciano).



adjectival function. The combination *ix-...-ajaw* is here understood as designating this person as one of the royal household of Baluun Chab, hence our suggestion of 'princess.' The same toponym is known from an incised Late Classic vase, where we likewise find the title Baluun Chab Ajaw, and there, much as on the Buenavista bones, the numeral nine is reversed at the onset (see Tokovinine 2013:46, Fig. 26e). Although we are unsure as to precisely where this place is located, we suspect on the basis of its restricted distribution that it may name a smaller site in the vicinity of Buenavista del Cayo.

This leaves us with the third set of weaving pins [Bones 3, 6, and 7] (Figure 10d–f). After the initial segment recording the usual *u-baak* 'it is her bone,' the name tags jump straight into the final titular segment, regularly written in just two glyph blocks as IX [MUT]AJAW. This can be read as *Ix Mutu'l* (or *Mutuul*) *Ajaw*, and again provides a statement of origin, conveying that this person stems from the royal household of the Mutu'l dynasty. Considering that these weaving pins date to the eighth century, we are in an ambiguous situation, since at that time both the royal house of Tikal and that of Dos Pilas used this toponymic title, each claiming to be the legitimate line (see Houston 1993:97-102; Martin and Grube 2000:39-42, 56-65). In this instance, then, the title of origin can be understood as either 'Princess of Tikal' or 'Princess of Dos Pilas.' Given that Tikal was antagonistic to Naranjo for the entirety of the Late Classic, especially between the seventh and ninth centuries (see Grube 2004:200-210; Helmke et al. 2018, 2020), it seems less likely that this set of bones would have originally belonged to a princess of Tikal. This leaves Dos Pilas as a more likely interpretation, and

we may recall that the mother of Naranjo's 38th king, K'ahk' Tiliw Chan Chahk, was herself a native of Dos Pilas who arrived to Naranjo in AD 682—at the behest of her father Bajlaj Chan K'awiil, the ruler of Dos Pilas—in order to rekindle the dynasty and strengthen the royal house of Naranjo (see Grube 2004:200-202; Helmke 2017; Helmke and Savchenko in press). As such, we might venture to suggest that these bone pins may in fact have belonged to the mother of K'ahk' Tiliw Chan Chahk, who is known in the literature as Lady Six Sky, although her actual name was probably something along the lines of Ix Wak Chan Jalam Ajaw Lem (see Grube 2016; Helmke 2017:95). If so, then the weaving pins may date to somewhere between 693 and 741, when Lady Six Sky exerted considerable power over Naranjo's royal house. The style and paleographic features of the glyphs do not rule out this possibility; nor does the dating of the archaeological context.

It is therefore interesting to consider how this set of carved bone pins made their way to Buenavista, and why they were grouped together, combining pins from high-standing women of Naranjo and Dos Pilas alongside pins from a princess of a (relatively) more humble local site. Were the pins heirlooms, perhaps inherited by the individual buried in Burial BV88-13, and brought to Buenavista as part of a marital alliance bringing together a noble woman of the Naranjo court with a member of the court of Buenavista? This would seem the most parsimonious explanation, at least in view of the available evidence. In fact, the strontium analyses of the skeletal remains showed that the individual interred in Burial BV88-13 did not display a local isotopic profile, but instead might have come from the upper Macal River valley. This may suggest that this individual originally came from a locality away from the Naranjo court, but eventually made her way there, before continuing on to Buenavista. In light of the glyphic texts, we are left to wonder whether she may in fact be the princess of Baluun Chab, and that this place was correspondingly located to the south of both Buenavista and Naranjo. This is a possibility that we hope to explore further as and when additional texts from the region are uncovered.

His or Her Weaving Pins?

Although we have now presented the weaving pins of Buenavista and we have been able to ascertain their original function, we have not yet discussed the individuals named on these pins. Should these necessarily be understood as the actual owners of these pins? Or, should we understand these name tags in broader terms, as the weaving pins that were owned by high-standing courtesans, but that the daily use of these pins were actually in the hands of other more specialized weavers? The question is an interesting one, as the answer could have considerably different implications

for the economy of the royal court. Were royals and high-standing courtiers and courtesans actually physically involved in the production of sumptuous materials that served to distinguish the elite from the remainder of the population? If so, the means of production and the specialized knowledge surrounding the production of sumptuary goods may have been controlled by the elite themselves, because they were the ones directly involved in the production of these goods. This may seem counterintuitive, especially considering the means of production in other early civilizations of the Old World (see Trigger 2003:358-373). Nonetheless, the production of textiles for elite consumption may have involved workshops that were both under the patronage of the monarchs but also physically attached to the royal court. This is the type of production that we now understand for the polychrome ceramics that were the hallmarks of the royal courts in the Late Classic, particularly that of Naranjo, which produced countless vases of the most outstanding quality, especially under the reign of the king K'ahk' Tiliw Chan Chahk (r. AD 693-728+) (see Ball 1993; Reents-Budet 1994).

We must also address the question of gender with regards to these weaving implements. For most researchers there is an inherent bias of associating weaving with women, as though there was an inherent division of labor and that weaving was an exclusively female occupation. The bias is a frequently repeated one in the academic literature, with statements such as: "It was one area of production in which women played a significant role" (Trigger 2003:359), something that seems to be reinforced by the depictions of Maya weavers in clay figurines and as represented in the Madrid Codex (see Dacus 2005:11-22; Hendon 2006:358-361). To this, Dacus (2005:19) even adds: "The activities of food and cloth production in ancient Maya society were two of the crucial and time-consuming duties of ancient Maya women, and thus served as defining elements of their social identity." Others have also stated that, "Textile production in Mesoamerica [...] has been seen as the full-time work of women but not as an occupational specialization" (Hendon 2006:354). Likewise, for the archaeological evidence at Caracol, the Chases and their colleagues go on to state that "of a sample of 47 examples, [a little less than half] were found in burials at Caracol; none came from epicentral tombs. There is one secure burial association between a pin and an adult female" (Chase et al. 2008:131). Why they chose to emphasize the relation to a female burial, without stating how many were found in burials of definite males is a little surprising, but shows the continued bias of assuming that weaving was specifically a woman's task.

In fact, if we take all of the evidence into consideration, we find that the glyphic name tags recorded on these weaving pins record not just the names of women, but also the name of males. This has several

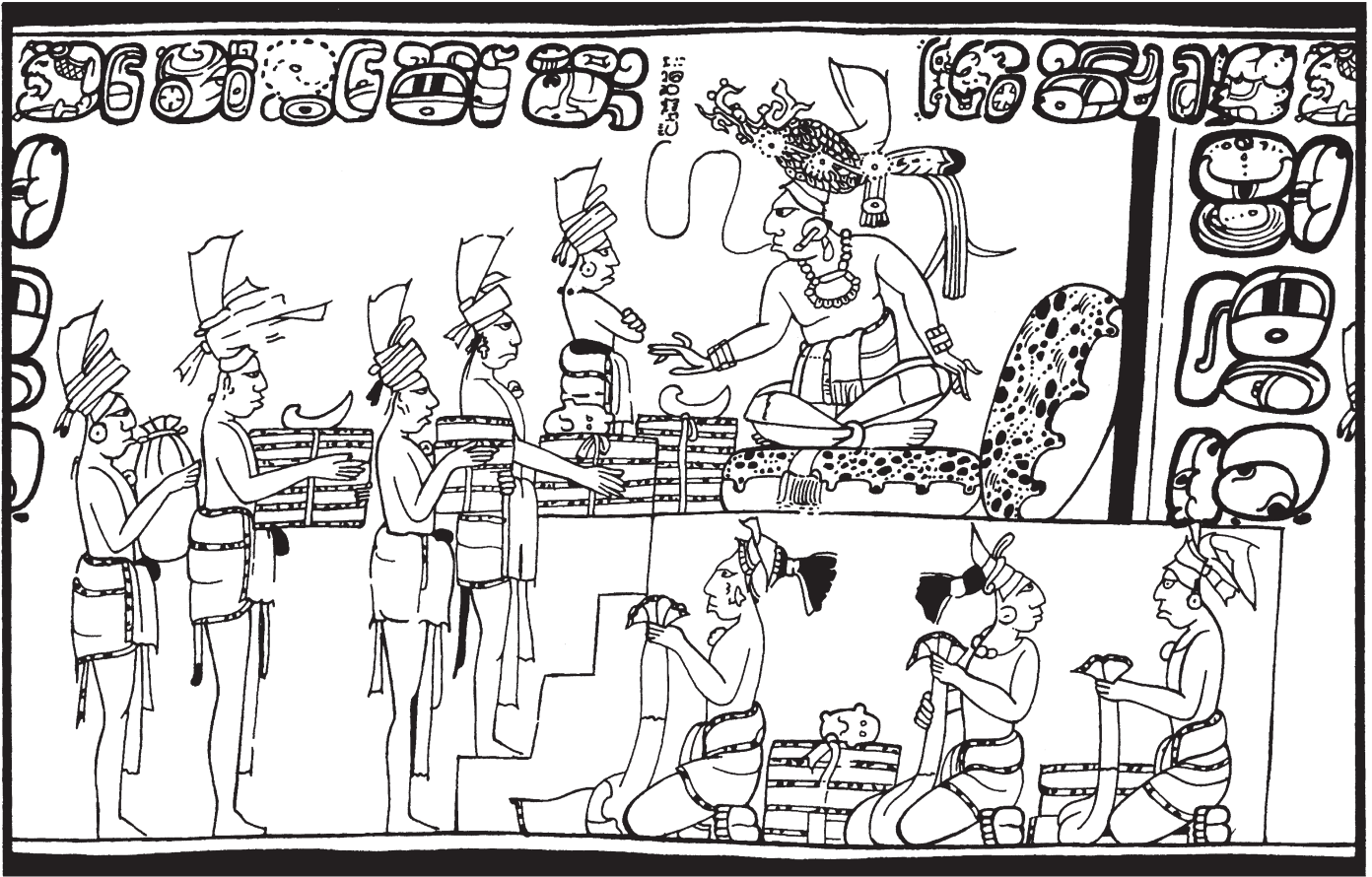


Figure 11. Palatial scene showing the presentation of tribute to the seated monarch of Pusilha, with courtiers and vassals presenting wrapped bundles and stacks of white cloth mantas, topped by *Spondylus* sp. shells (drawing by John Montgomery, after Wanyerka 2003:34-36, Fig. 81).

potential implications. Again, if the names appended to such weaving pins were only nominal, and were used by weaving specialists attached to particular elite individuals, then the male-female distribution of names may not be altogether significant, except to signal that males, as well as females, could be patrons of weaving workshops associated with the royal court. If, however, the names recorded on these weaving pins record actual personal possessions, we gain a rather different picture, one wherein high-standing individuals of the royal court were actively involved in the production of textiles. This view would seem to have some precedent in other domains, inasmuch as artisans bearing the high title *ajaw* 'lord' have signed their names to both ceramics and stone monuments (see, e.g., Martin et al. 2015; Montgomery 1995; Stuart 1987:5-7, Figs 7-8). As a result, it may be that at least some sumptuary goods were restricted to the royal household, not just in terms of their consumption, but also their production and, vitally, the knowledge of their production. As Hendon (2006:354) rightly points out, textile production in Mesoamerica was not just an occupational specialization and a highly

skilled craft, but as "a sociotechnical system that is a form of knowledge, a set of techniques, mastery of a particular technology, and an educational process that is transmitted across generations, within households, and embodied in the textile itself." This provides a radically different perception of the functioning of the royal court and the active involvement of the members of the royal house in the economy of a given site.

It should be kept in mind that it is not solely the epigraphic evidence that supports the ownership of weaving pins by both males and females. Indeed, the archaeological evidence suggests this as well. At Caracol, for instance, "individual adult male burials are found with awls and hairpins, while individual adult female burials are associated with pins and spindle whorls" (Chase et al. 2008:134). The bone pin of Chac Balam was found in the burial of a male, much as that found at Baking Pot; whereas the bone pins from Dzibilchaltun, Santa Rita, and Altun Ha were all found in the interments of females. In this respect, we should also remember the weaving pins found in the burial of Jasaw Chan K'awiil I at Tikal, which were clearly labelled as his

own, suggesting that he too was a weaving enthusiast. When we recall that many of the carved bones from his tomb are those of humans, we gain, perhaps, a slightly different impression of the man, who both vanquished the forces of Calakmul on the battlefield, but may also have enjoyed a bit of weaving, potentially using pins fashioned from the bones of his enemies. Whereas somewhat notional, this does convey something of the individual, perhaps reminiscent of the affinity of the samurai for poetry, song, and flower-gazing.

The takeaway from the evidence at hand is that weaving was a crucially important aspect of the ancient Maya economy, not least when we consider that tribute was often measured in white cloth mantas (see Stuart 1995:352-374, Fig. 10.11). Consider the many scenes of individuals lining up within the royal court, bearing stacks of mantas, topped with spiny oyster shells and bunches of quetzal feathers (Figure 11). We can also see that the bias of the female-dominant world of weaving and textiles is quite probably an anachronistic attribution based on modern and ethnohistoric practices, and that in the Classic period the situation may have been considerably more complex, with expert weavers distinguishing themselves among both sexes, and wont to take pride in and personally mark their favored weaving implements, as perhaps seen in the many carved and inscribed examples that have come down to us. This fascinating set of weaving pins from Buenavista also shows the role of weaving implements in defining identity and establishing continuity between the generations, as honored heirlooms, and speak of the continuity of specialized knowledge that was transmitted not only from generation to generation, but also regionally, from court to court.

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Lady Six Sky, Naranjo Stela 24 (rubbing by Merle Greene Robertson).