



The PARI Journal

A quarterly publication of the Pre-Columbian Art Research Institute
Volume V, No. 1, Summer 2004

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The electronic version will remain available at:
www.mesoweb.com/
pari/journal/0501

ISSN 1531-5398

A Broken Sky: The Ancient Name of Yaxchilan as *Pa' Chan*

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Emblem glyphs have long been a focus of research in Maya studies and remain the primary means by which we attempt to penetrate and comprehend the political geography of the Classic Maya. By now it is well known that each represents a royal title and describes the *k'uhul ajaw* or "holy lord" of an individually named polity or kingdom.¹ Many of these compounds have succumbed to decipherment in recent years, unmasking the original names of these petty states. Slowly we are building an indigenous nominal landscape, a map of political identity that was rich in both topographic and conceptual symbolism.

The emblem glyph of Yaxchilan, Chiapas, Mexico, was one of eight identified by Heinrich Berlin in his original discovery of the form (1958). In fact, the site used two distinct emblems, often paired, which Berlin dubbed Y-1 and Y-2. Yaxchilan monuments are generously provided with examples of both, but it is clear that Y-1—nicknamed "cleft sky" or "split sky"—was the more dominant, not least because it was the only one seen in foreign contexts (appearing in the inscriptions of Piedras Negras, Palenque, Bonampak, and Dos Pilas). To judge from the plentiful supply of split sky signs on pottery linked to Uaxactun, this polity appears to have had the same name.²

The cleft sky is formed from the conventional T561 CHAN "sky" sign by the addition of a split or notch in its upper portion—together usually regarded as a distinct sign designated T562 (Figure 1a,

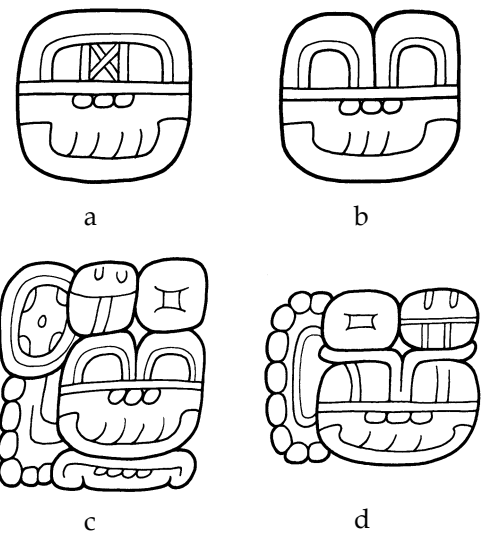


Figure 1. The cleft sky sign in the Yaxchilan Emblem Glyph: a) T561; b) T562; c) YAX St.10, H2; d) PNG P3, K1.

b).³ At Yaxchilan itself this modification is usually shown as a plain arching divide or V-shape cut (Figure 1c), although in most foreign mentions tendril-like emanations, known as T299, are added (Figure 1d). Like the normal sky glyph, the cleft sky can be suffixed by *-na*, suggesting (though not proving) that *chan* is still involved in

¹ For the evolving history of emblem glyph research see Lounsbury 1973; Ringle 1988; Mathews 1991, 1997; Stuart and Houston 1994; Martin and Grube 2000.

² The monuments of Uaxactun, few of which survive in good condition, have provided little help in this matter. The only likely split sky there, and this probably a toponym, appears on Stela 2 (Graham 1986:136).

³ For glyph designations see Thompson 1962.

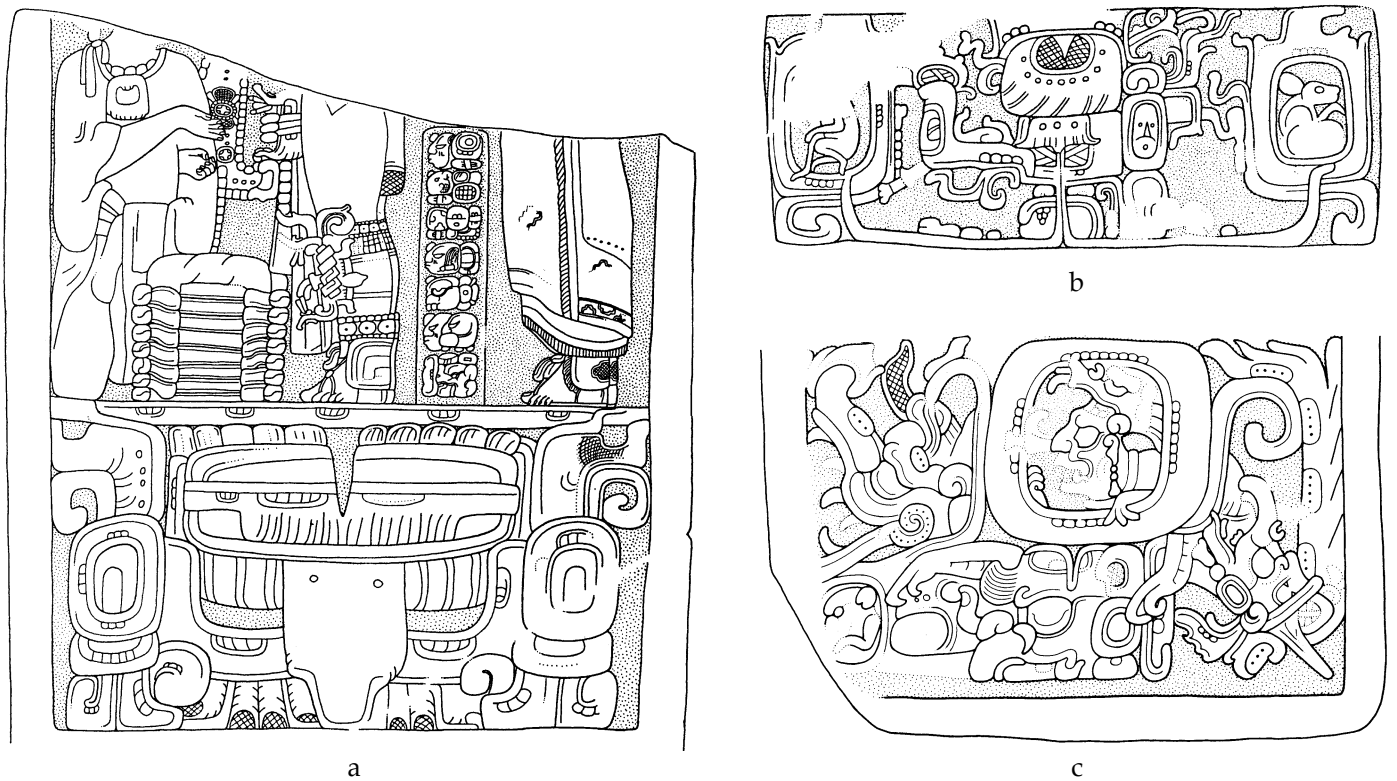


Figure 2. Basal toponyms on Yaxchilan monuments: a) YAX St.4; b) YAX St.7; c) YAX HS.3, Step III.

the reading.

Each Maya polity was centered on a core settlement or city, whose name was sometimes adopted to represent the entire domain (Stuart and Houston 1994). Because of its presence in the emblem glyph we know that the split sky named the Yaxchilan state—but there is good reason to believe that it also named the city itself (ibid.:57-58). For example, it is shown as a basal pedestal on Yaxchilan monuments, a motif describing the specific location where pictured events occur. This is most clearly seen on Stela 4, where a large supernatural bird bears a cleft sky sign in its forehead (Tate 1992:192) (Figure 2a). This particular avian is a head variant for **CHAN** “sky”—which makes a persuasive case that this word had an active role in the name. A different pedestal appears on

Stela 7, which presents us with an even more fantastic beast wearing a split **HA'** “water” glyph (Mathews 1997:242) (Figure 2b). This reference immediately evokes the Usumacinta River, which flows in a great horseshoe around Yaxchilan and its environs—and only a scant few meters below the ceremonial core of the city. Our supporting creature combines a number of cosmic motifs and has a distinctive eyelid design that helps signal a *chan* reading. Indeed, the split here belongs not to the “water” but to an underlying but obscured “sky” sign. A fuller version of the sky bird returns in the basal register of a block from Hieroglyphic Stairway 3 (Figure 2c). This is more obviously a glyphic spelling, with a preceding **TAHN** logograph (and what may be an infix **HA'** sign) and final **-na** phonetic complement. *Tahn* is a familiar component of locative expressions, meaning “(in the) middle (of)”, “in, inside”, or perhaps “(in) front (of)”.⁴

These elements recur in, and are to some extent clarified by, textual references to the Yaxchilan toponym (Figure 3a-c). All three known instances—which oddly enough appear on a single monument—share the sequence *tahn ha' ? chan*. Taking one of these passages (Figure 3a), the most straightforward translation would

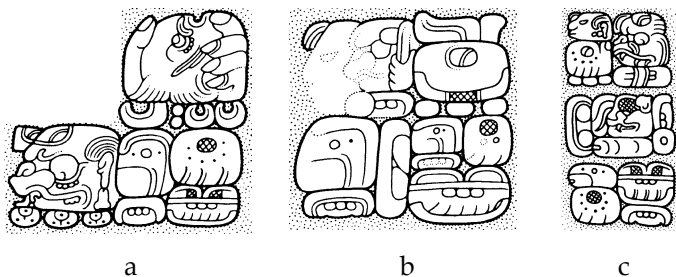


Figure 3. Toponymic statements at Yaxchilan: a) YAX L.25, M1-M2; b) YAX L.25, U1-2; c) YAX L.25, I3.

⁴ For the latter see Stuart 2004.

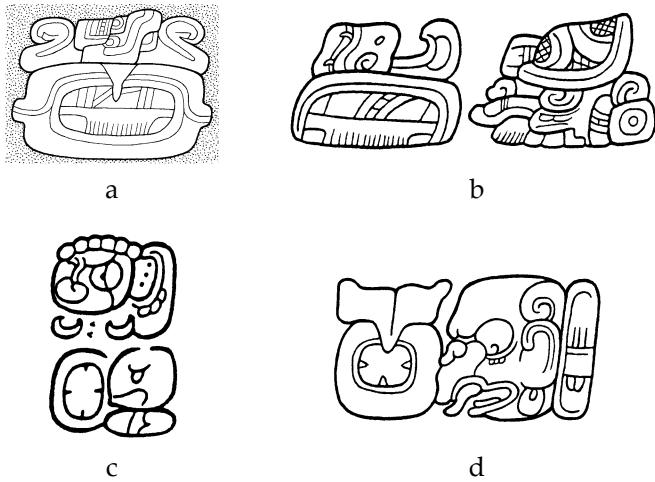


Figure 4. The cleft device in spellings of “birth”: a) TIK St.26, zA4; b) unprovenienced vessel; c) PNG P.1, zA1-2; d) MQL St.11, B6a.

be *tzakjiyy k’awiil tahn ha’ ? chan* “conjured K’awiil in front of the water of Yaxchilan”.⁵

What remains to be understood is the precise value of the cleft and the semantic basis of its relationship to “sky”. Split motifs appear in several different hieroglyphs, and at least one has already been tied to a decipherment. The “Stormy Sky” name used by at least two Early Classic rulers of Tikal depicts the lightning god K’awiil emerging from a crack in the sky (Figure 4a). David Stuart recognized the substitution of this form for another spelled **SIH-ja-CHAN K’AWIIL** *Sih(y)aj Chan K’awiil* “Sky-Born K’awiil” (Houston and Stuart 1996:295) (Figure 4b). The bent-armed posture of the god signifies newborn or infant status and alludes to ideas about the genesis and transformation of deities (Taube 1994; Martin 2002). A similar substitution seemed apparent in personal names found at Piedras Negras and Machaquila. A secondary lord at Piedras Negras is called **SIH-ya-ja K’IN-cha-ki** *Sihyaj K’in Chaak* “Sun-Born Chaak” and this was plausibly equated with “Cleft”-**K’IN-CHAAK-ki**, the name of two kings of Machaquila (Stuart, Houston, and Robertson 1999:47) (Figure 4c, d). This connection had notable implications for Yaxchilan, since if true it would demonstrate that the cleft alone could stand for *sih* and its inflected form

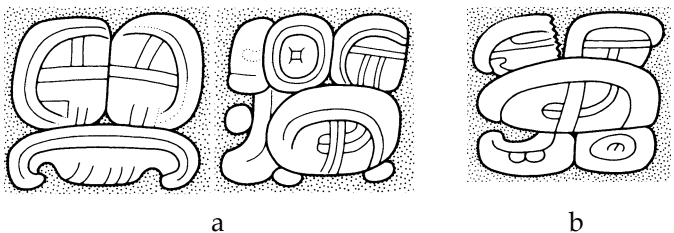


Figure 5. Early emblems at Yaxchilan: a) YAX L.47, D8-C9; b) YAX L.35, B2.

sihyaj. There seemed little reason not to extend this value to the Yaxchilan main sign and, consequently, *Sihyaj Chan* “Sky-Born” gained wide currency among epigraphers.

The difficulties that remained were centered in Early Classic Yaxchilan, where emblems differed from the familiar and much more common Late Classic forms. In two early cases (Lintels 22 and 47) a single sky sign is cleaved entirely in two (Figure 5a); while as many ten examples on the four-lintel sequence of Structure 12 (Lintels 11, 49, 37 and 35) show the sky sign attenuated on one side, sometimes with a clearly serrated or torn edge, effectively supplying a “half-sky” (Figure 5b).⁶ While it was still possible to imagine that these might refer to notions of “birth”—some supernatural birth scenes in Mesoamerican art show the origin cracked in two like an egg—the logic was decidedly thin.

This reflects the state of affairs until the discovery of a new inscription at Dos Pilas, Guatemala, in 2001. In an operation by the Cancuén Archaeological Project of Vanderbilt University and the Universidad del Valle de Guatemala, ten previously unknown blocks of Dos Pilas Hieroglyphic Stairway 2 were recovered from Structure L5-49 (Fahsen 2002). Federico Fahsen analyzed the inscriptions and shared his findings with Nikolai Grube, who added his own observations and brought images of the texts to the European Maya Conference held in Hamburg later that year. These historically intriguing passages abound with local toponyms—some well known, others completely unseen. The most significant from an epigraphic viewpoint appeared on a new block from the East stair, a compound spelled **K’INICH-pa-a-WITZ** *k’inich pa’ witz* (Figure 6a). Grube noted its close resemblance to the toponym of Aguateca—a site only some 12 km distant from Dos Pilas—which consists of **K’INICH**-“Cleft”-**WITZ** *k’inich ? witz* “Great-Sun

⁵ This is not the only possible translation, since it is still unclear whether *ha’* is to be understood as a reference to: a) Yaxchilan’s location close to a river; b) Yaxchilan’s location within a great bend in the river and (roughly) midway down its length; or c) a watery metaphor for the great plaza of the city. Such questions are only amplified by the other two examples—both of which follow the name of Ix K’abal Xook, a prominent Yaxchilan queen. Between person and place come glyphs that read *yohl tahnil* “heart of the chest of” in one case (Figure 3b) and *uyokte’el* “foot of the tree of” in the other (Figure 3c). These appear to be metaphorical, even poetic, ways in which the queen is set in some relationship to the city—as if to say that she is the “heart and soul” or “pillar” of the place. Hypothetically, the continued presence of the *tahn* sign in these instances might reflect its absorption into the parent toponym (in a process not unlike the one that produced Tanchah, Quintana Roo). This would explain its otherwise odd appearance as part of the expanded pedestal spelling on Hieroglyphic Stairway 3 (Figure 2c).

⁶ An unprovenienced Early Classic vessel textually linked to the Uaxactun area also shows a fully divided T561 sign.

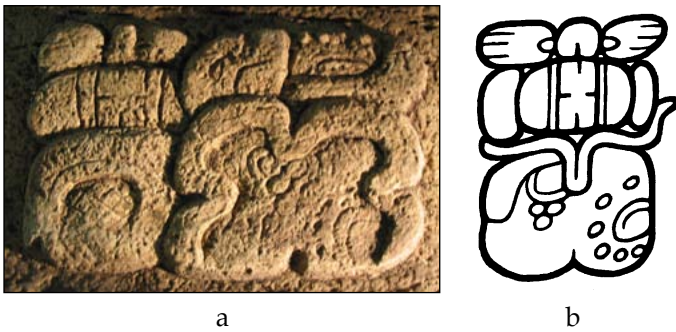


Figure 6. The toponym of Aguateca as *k'inich pa' witz*: a) DPL HS.2 East, Step 5/2, F2; b) AGU St.1, B10a.

“Cleft” Mountain” (personal communication 2001; Grube in Fahsen 2002) (Figure 6b).

As first described by Stuart, the “cleft mountain” is a literal reference to the topography of Aguateca—a site positioned on a high, rocky escarpment riven by a deep chasm (Stuart 1987: 20-23; Stuart and Houston 1994:9-12). Initially, it was not clear that the split device was a lexeme in its own right, and the idea that it was a semantic embellishment to the mountain sign was favored.

The word *pa'* and its derivatives are rich in meanings appropriate to the Aguateca place name. In Yukatek dictionaries we find: *pa'* “quebrar (to break)”; *pa'a* “dividir (to divide)” (Barrera Vasquez 1980); *paa* “cosa quebrada (something broken)” (Martínez Hernández 1929); as well as compound forms such as *pa'al pak'* “portillo de pared (gap in a wall)” (Barrera Vasquez 1980). Intimately related are *pa'x* “quebrar (to break)” and its compounds, for example *pa'axal muyal* “deshacerse los nublados (the clouds break up)” (Martínez Hernández 1929; Barrera Vasquez 1980). The same root appears in the Yukatek relatives of Itzaj with *pa'* “rajar (to split)” (Hofling and Tesucún 1997) and Mopan with *pa'al* “quebrado, rajado (broken, split)” (Ulrich and Ulrich 1976). In the highlands of Guatemala: Mam has *paaxj* “rajarse (to split)” (Maldonado Andrés 1986); Q'anjobal has *paq'a'* “quebrar algo con las rodillas y manos (to break

something with the knees and hands)” (Diego Antonio et al. 1996); Q'eqchi' has *paq'al* “rajado, quebrado (split, broken)”; and K'iche' *pa'x* “quebrado, rajado (broken, split)” (Ajpacaja Tum et al. 1996).

If the parallel between Aguateca and Dos Pilas holds then, as Grube suggested, the split motif must signal a PA' value and the Aguateca place name be decipherable as *k'inich pa' witz* “Great-Sun Split Mountain”. The logic of this was compelling, and it occurred to me that it might be just as applicable to the Yaxchilan place name. Here a *pa'* reading would provide a much better explanation for the problematic cracked and divided sky signs of the early period, as well as an arguably more coherent compound of [PA']CHAN *pa' chan* “split/broken sky”.⁷

There are two additional lines of evidence that support the identification of the cleft as marking PA'. One comes from far to the north at Xcalumkin, Campeche. Here we see a substitution in the name of a historical character called Kit Pa'. Usually spelled *ki-ti-pa-a*, on one occasion it is rendered with a very rare split sign, T649, in place of T586 *pa* (Figure 7a, b).⁸ Although occasionally included in syllabaries under *pa*, it is clear from the iconography that this must be logographic PA'—here in the form *ki-ti-PA'-a* (Dmitri Beliaev personal communication 2002). From its position at the end of the sequence we can deduce that *pa'* most likely acts as a noun in this case.⁹

The significance of T649 PA' is that it would constitute a “full” sign—one which is almost always conflated elsewhere.¹⁰ The reasons for this are not hard to discern, since the Maya were keen to exploit the iconic

⁷ It is possible that additional derivational or inflectional suffixes were attached to the *pa'* root, but not represented in the spelling at Dos Pilas. Parenthetically, Alfonso Lacadena had considered a *pa'* value for the cleft at one time, but abandoned it in light of the emerging data on *sihyaj* (pers. com. 2001). See also Boot (2004).

⁸ A rather eroded version of this sign may appear on a small drum altar from Edzna, while the codex-style vessel K1457 has another candidate at I3, this one with emanations and the internal cross-hatching of T586 *pa* (Robicsek and Hales 1981:100).

⁹ *Pa'* has more than one sense in Mayan languages, and as a noun can describe an enclosing wall or fortress, or a bank of earth, such as one might find on a riverbank. The word *kit* appears in Yukatek as an honorific form for fathers and uncles and has that metaphorical sense in a number of god names (one possible, rather loose translation of *kit pa'* would thus be “Father Fortress”).

¹⁰ We see this same phenomenon in the “Knot-Eye Jaguar” name that was popular among kings of the Lacandon region. It has been commonly assumed by epigraphers (myself included) to be a conflation of the tied cloth band T684a JOY? with the jaguar head T751 B'ÄHLAM. However, close inspection of the “Brussels Stela” reveals an unconfused version of the same name in which the first part is clearly a skull with a knotted cloth band threaded through its eye—resembling the manner in which a trophy skull might be carried or displayed. This sign is, to my knowledge, unique in the corpus and only otherwise represented in its union with the jaguar head.

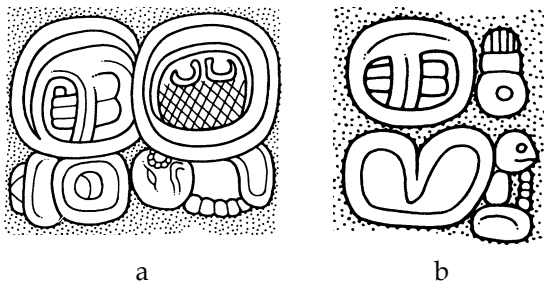


Figure 7. Substitution in the name of *ukit pa'* of Xcalumkin: a) XLM C.6, A2; b) XLM P.7, C2.

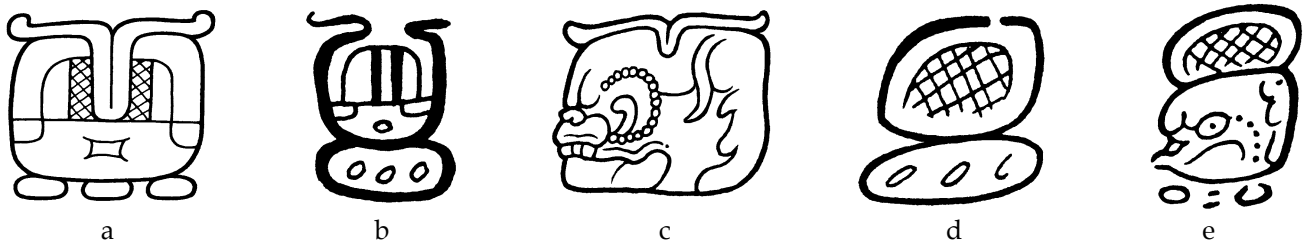


Figure 8. Variations in the spelling of the month name Pax: a) T549; b) Dresden Codex 61c; c) DPL St.2, D7; d) NTN G.Ib, G4; e) K1813, A2.

potential of the writing system to forge meaningful, semi-illustrative unions wherever they could (Martin in press). To graphically depict the subject as split or broken proved almost irresistible. The rare Xcalumkin spelling may well have arisen precisely because the grammatical purpose and sense were different—there was no object to be divided or broken.

The second example, the month name Pax, is not so telling but does raise some interesting iconographic issues. Epigraphically, we know that Pax had much the same reading in the Classic era (Stuart 1987:28, 33)—although recent developments allow us to refine its spelling. The most common version, T549, is illustrative of a split-log drum mounted on three squat feet (Kelley 1976:135, 333)—with the same emanations seen in some split skies rising from a central cleft (Figure 8a). This is duly reflected in Yukatek *pax* “tambor, música (drum, music)” (Barrera Vasquez 1980), *paax/pàax* “instrumento musical (musical instrument)” (Bastarrachea, Yah Pech, and Briceño Chel 1992; Bricker, Po’ot Yah, and Dzul de Po’ot 1998); as well as Mopan and Itzaj’s *pax* “marimba, música” (Ulrich and Ulrich 1976; Hofling and Tesucún 1997).¹¹

The T549 logograph shows occasional **xa** suffixes, while a more common conflation shows the skull sign **xi** with the cleft and tendril device in its crown (Figure 8b, c). Fully syllabic versions are formed from **pa-xa** and **pa-xi-la** (the latter includes a nominal ending of *-VI*) (Figure 8d, e). The variation of these **xa/xi** forms raises an important issue, since we now know that the vowels chosen for terminal syllables serve as a guide to vowel quality within the word (Houston, Stuart, and Robertson 1998). In particular, the disharmonic **-xi** endings point to vowel complexity, while the synharmonic **-xa** endings are more typical of a simple short vowel. There is a temporal dimension here, since the **-xi** signs are, where known, earlier in date than the **-xa** forms. This conforms to a pattern in which spellings change as the Classic period progresses and vowel complexity is apparently lost (ibid.). Even if *pax* “drum/music” did not originate in *pa’/pa’x* “split” (by way of the split-log drum), there is clear intent to exploit its homophonic qualities and

to portray Pax with the same cleft that is elsewhere diagnostic of *pa’*. While it is tempting to read T549[**xi**] and **pa-xi** as *pa’x(VI)*, the target during the Classic was more likely the *paax/pàax* still seen today—in the form *paax(VI)*. Spellings from the mid-eighth-century onwards, including the Postclassic Dresden Codex, show **-xa** endings—but whether this reflects a genuine shift to short vowel *pax*, or simply an erosion of earlier conventions, is hard to say.

From the description above, it will be clear that the tendril-like emanations of T299 do not constitute an independent sign, but are instead features of the open clefts in **PAX** and, less consistently, in the prototypical **PA’** (as well as in other, seemingly unrelated split signs).¹² The similarity between these lines and those that emerge from the human eye glyph is more than coincidental, since both refer to types of sensory experience, with sight and sound as related projective emanations (Houston and Taube 2000:286). Our tendrils would seem to represent radiating sound: whether the vibrations of a split-log drum (Justeson 1984:342) or, in the case of the more elaborated Yaxchilan emblems, the din of a sky rent asunder.

Conclusions

Grube’s proposal for the Aguateca place name as *k’inich pa’ witz* has implications for a number of other cleft motifs in the Maya corpus. In the interpretation set out here, it offers a reading for the name of Yaxchilan which satisfies outstanding iconographic problems and

¹¹ The name Pax for the sixteenth Maya month is only attested in Yukatek (see Thompson 1950:Table 8). Rare **-la** suffixes in the Classic era (see A2 of K1813 at www.mayavase.com, Figure 8e in this paper) clearly point to a *-VI* ending, presumably *-al* to give *pa’xal* or *paaxal*. Another common variant shows an amphibian with a cleft crown—which, if not indicative of a dialectical variation, should be a separate logograph, perhaps based on a homonym.

¹² Boot (2004) covers the ground first explored by Grube in recognizing the cleft motif as analogous to the **pa-a** spelling on the new Dos Pilas step. Citing many of the same examples listed in this study and referring to the Yaxchilan case, he argues that the underlying **PA’** logograph is T299.

provides a rationale for all its variants.

Early forms of the emblem glyph adopt an illustrative approach, but in time T561 CHAN was modified by a formulaic cleft we can equate with T649 PA' to create the amalgam T562. Although this was to all intents and purposes a logograph in its own right, the open issue of intervening suffixes suggests that [PA']CHAN remains the best transcription. The T299 emanations were optional embellishments to PA' with no value of their own, although their conceptual importance should not be underestimated. Earlier confusion between the *pa'* and *sihyaj* signs was understandable, given that the latter includes the self-same split motif, albeit purely illustrative and silent in value.¹³ The dominant Yaxchilan emblem glyph would now read *k'uhul pa' chan ajaw* "holy lord of split sky"—with the place name formula *tahn ha' pa' chan*, meaning "in front of the water of split sky" or perhaps "mid-water split sky".

Can we get closer to the actual meaning of the Yaxchilan name? The split device undoubtedly represents a portal for the birth or rebirth of deities in Maya iconography. The Maize God himself is famously reborn through a split in the earth created by the lightning axes of storm gods. We know too that a break in the sky brings forth K'awiil, a personified bolt of lightning. Yet the earliest examples of the Yaxchilan name, as we have seen, do not emphasize these supernatural gateways so much as the idea of division and breakage. This suggests that a split, broken, or cracked sky is closer to the original semantic intent.¹⁴

The craggy karstic peaks that rise to the back of Yaxchilan and dot the landscape around it could be viewed as breaking the sky with a jagged edge (Alfonso Lacadena, personal communication 2001). But interestingly the Motul Dictionary, a colonial Yukatek source, gives us *pa'xal u chun ka'an*, an idiom with the sense of "amanecer (to dawn)" (Martínez Hernández 1929; Barrera Vasquez 1980). A literal reading of the Mayan would be "the base of the sky breaks", describing the first light to penetrate the horizon and a direct analogue to our own "break of day" or "crack of dawn". Whether it is this kind of metaphor, or a quite different one, that is at work, I suspect the solution to the Yaxchilan place name lies somewhere in this literary and poetic realm, rather than in a particular mythic narrative or reference to local topography.

Acknowledgements

The ideas in this paper were formulated at the Hamburg conference of 2001 and developed further in helpful discussions and correspondence with Nikolai Grube,

Alfonso Lacadena, Dmitri Beliaev, Albert Davletshin, Federico Fahsen, Stanley Guenter, Marc Zender, David Stuart, and Joel Skidmore.

Illustration Credits

William Coe: Figure 4a; Ian Graham: Figures 2a-c; 3a-c; 5a,b; 6b. Simon Martin: Figures 1a-d; 8a. David Stuart: Figures 4b-d; 8b-e. Eric Von Euw: Figure 7a, b. Marc Zender: Figure 6a.

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¹³ Recent work by Barbara MacLeod, David Stuart and others recognizes that the full SIH/WINIK "birth/hatch" glyph shows the newborn emerging from a split in T535 "capped ajaw"—an undeciphered sign with the sense of "seed/egg". A better reading for the name at Machaquila might be Pa' K'in Chaak "Split Sun Rain God".

¹⁴ The lack of emanations in the Yaxchilan T562, while seemingly incidental, could imply that the sense is not one that involves a violent or noisy accompaniment. Foreign references lack the subtlety of this distinction and include them in fully elaborated forms that imply no change to the reading.

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Return to the Great Forests

FRANS BLOM'S LETTERS FROM PALENQUE

December 1922 - March 1923

Translated and with an introduction and notes by Jesper Nielsen & Tore Leifer

Editor's Note

As explained by the translators in their introduction to this series in PARI Journal 4(3), the Maya archaeologist and explorer Frans Blom carried out one of the first scientific investigations of Palenque, Chiapas, Mexico, from December 14, 1922, to March 14, 1923. This issue continues the publication of his letters from the site.

January 30, 1923.

Last Sunday huge crowds of "ladinos", the half-breeds, came to see the bones I exhumed from the burial chambers here. It appears to be the most sensational thing that has happened around here in the last 100 years. Revolutions are nothing when compared to these pieces of bone. 19 men, 32 women and countless children showed up. They all stood gaping in front of the objects in the small museum I have put up in my hut.

Having learnt from earlier experiences I had put up some large glass plates in front of the items in my collection. Curiosity is a woman's virtue, and around here you see best with your fingers, so, to the great grief of the visitors it was "only look, don't touch". Afterwards I dragged them along on the big tour to the Palace, up into the Tower and down into the deep, humid and sinister subterranean corridors and rooms. Then I took them to the tallest pyramid and from there down into some burial chambers.

The village of Palenque has, after having been the neighbor of the ruins for 250 years, suddenly discovered them. Yes, to my "pleasure" I have been informed that even more people will show up next Sunday. I dread the thought of this since Sunday is usually my favourite day because I don't have to keep an eye on my workmen. I walk around on my own with my tape measure and my drawing board. At my own leisure I can concentrate on the details of the ornaments and figures. However, my eyes often move away from the drawing board and look to the forest or across the plains of Tabasco below me. My thoughts make a journey to a distant past when this place was inhabited and alive. Then the buildings stand, as they were at that time, painted with a deep red color, figures and ornaments in pink, green, yellow, blue and black. "Halac uinik" [sic], meaning the true man, was the absolute ruler over the masses who toiled away to build temples to their gods. "Ahaucan mai," the high-priest, lifts smoking copal to Itzamna, the great god, the god of the rising sun and life, god of science and astron-

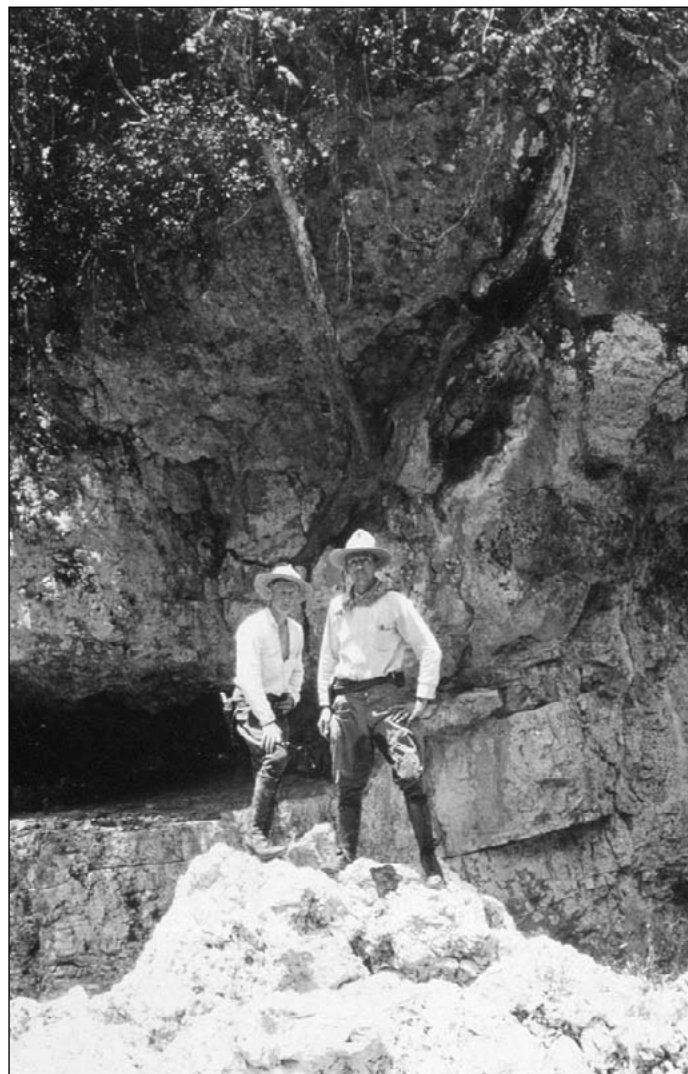


Figure 1. Oil scout Frans Blom and geologist J. B. Burnett near the Río Usumacinta, spring 1922. Courtesy of The Bancroft Library, University of California, Berkeley.

omy. Priests and lords wore magnificent headdresses made of the feathers from the quetzal bird. One has to have seen that bird in order to appreciate its splendor of colors. Slaves haul stones for the buildings, the stone carver makes a relief in limestone with his stone instruments, the potter forms small clay whistles in the shape of humans or animals. Here lime is burnt, there logs of the hard zapote tree are hewn with axes of obsidian. For two, perhaps three, centuries this place was a buzzing

beehive, and then the population left the city, nobody knows why, and migrated to the Yucatan Peninsula. The forest claimed temples and palaces and hid them for hundreds of years. Only in the late 18th century were they rediscovered.

And now, hundreds of years later, I sit here among ruined mounds, all that has been left from a once mighty people. It is not strange that my thoughts drift back to what was once here.

Well, back to the present time and my Sunday visits. When they had become quite tired, they all gathered in my far from spacious hut, sat down all over the place, fingering everything they could get near. If you had not grown used to this kind of impudence I suppose you would lose your temper, and sometimes I nearly get mad at them. But I have now found a remedy to get rid of them. As soon as my food is brought in they disappear—to return when I have finished eating. But then—the door is closed. I either take a walk up to the ruins, or I lie down on my camp bed with a book. They continue to come sneaking to see if there should be a chance to get in. But no.

Around 2 p.m. the men ride back; towards the evening, when it gets cooler, the women slog away with the little ones sitting astride on their hips and those a little older clinging to their skirts. Once more everything is calm.

There is still plenty of work to be done here, at times despairingly much so. Every day something new is discovered during our work, and I hardly get time to do the most important tasks that had been scheduled.

For example yesterday; it was raining so we couldn't work outdoors. I therefore began to clean up the interior of the Temple of the Sun; for a thousand years the floor had not been swept and you can probably imagine what it looked like. A couple of feet of earth and dirt covered the floor. But these kinds of layers are exactly what I like: a lot of things can be hid underneath them. We began the cleaning work, digging with trowels and brushing with brushes. And one wonderful thing after the other came to light. A large earthenware jar was found, with an excellently modeled face on one side. We found stone implements for stone carving, small votive figures in animal shapes made of clay—a fish was especially well made—a darning needle made of bone and many other strange things. The most wonderful thing, however, was probably the floor itself, made from lime mixed with very small and fine stones, its surface polished, shining like a parquet flooring, and painted in a deep red colour. The floor was swept and brushed and then surrounded by a fence made from an excellent palm covered by huge thorns on the trunk; it will keep intruders from trampling on the venerable floor.

Some days ago we discovered a burial chamber; I named it the tomb of the dentist, because either several persons have been buried in the chamber or otherwise

is it a dentist who lies there surrounded by his entire collection of artificial teeth. I found small teeth, probably from women; the front teeth had been filed into a point—which was regarded a trait of beauty among the Maya—and large men's teeth, the front teeth inlaid with small, black stones. Furthermore there were bad molars that had been filled. Even as dentists the Maya people knew a thing or two.

February 1, 1923.

This morning, one of the Indians who live nearby brought me the sensational announcement that he had discovered a huge cave with several rooms. This sounded promising, though I had my doubts as to the size of the cave and the number of rooms. The Indians are so superstitious and afraid of the dark and of ghosts that they do not venture on entering any cave.

So off we went, climbed down a couple of hillocks and up again, waded across a few streams and reached the "cave". It turned out to be a minor burial chamber with a narrow side corridor which could be seen from outside. Hence his story about the many rooms. I measured the burial chamber, as is my custom; and since we were there, we examined it more closely. Another hole in the ground was found; another burial chamber filled with earth and debris. This too was measured, and when I climbed out of it, I noticed another hole between the stones in one wall of the chamber. A stick was put into it and disappeared. More burial chamber! I managed to loosen enough stones to get my head in and an arm with a light: *Hola!* Nice stuff in this chamber! A well-built room, and in one corner a table of stone slabs; a skeleton seemed to be lying on top. I retired my head and saw the Indians and my "boy" stare at me with open mouths and frightened eyes. They fear that I should order them to enter first into these hellish caves. I opened a hole large enough to squeeze oneself down. Armed with a light, a brush and a trowel, I disappeared into the hole. This was a lovely burial chamber, a real treat for an archaeologist. A well-built, vaulted room; along one side a low dais on which a skeleton lay outstretched.

Since the vault has been well walled up, there is only a little earth and dust over the skeleton; possibly two persons are buried here. Often one finds a well-built coffin made of limestone slabs, and on the stone lids, a second person has later been placed. As I didn't have all the things necessary in order to take out the burial find, I let it be for the time being. I did, however, take out a round earring or rather ear-disk, carved out of mother-of-pearl, 9 cm [3.5 inches] in diameter; it lay loose upon the thin layer of earth covering the skeleton. On Saturday I will begin the work of taking out this grave, and I expect a lot from it.

Taking out such a grave is a laborious task. First you measure the burial chamber, then you go home and make

a plan of it. This plan is divided in squares measuring 20 cm [7.8 inches], and when the finds are to be taken up you first divide the burial chamber into squares equal to the squares on the plan. With brushes and trowel the find is cleared so that it lies in relief. Then every object is drawn onto the plan and numbered. As the objects are taken up, they are given the corresponding numbers and wrapped up. As soon as one layer is taken up, you brush on in order to examine whether there should be more further down. This is often the case, and for each new layer a new plan is made. For further safeguard, all loose dirt is carried up to two Indians sitting around a straw mat. Here they perform an operation they call "despulgarr", which in translation means something to the effect of exterminating the lice from your head, a favorite sport in this country.

I had taken a good look around and was about to crawl out when my "mozo" asked me whether he could come down; a courage unheard of, rewarded with a yes.

He came crawling, legs first and then the rear. But it took a while before the rest arrived; with half his body out in the open air and the other half hanging into the burial chamber he muttered a whole little series of prayers and incantations to all good saints to protect him during this daring venture. Thus protected he finally slid into the burial chamber, and when we crawled back up into the light of day it was obvious from the look of his compatriots that they considered him either a mad or a very brave man. As for myself, they don't care that much about me anymore; they have realized that I am mad, a heathen, or that I have a quite unusually powerful saint.

When living among these peoples, you soon realize that their catholic religion is nothing more than a change of dress for their ancient gods. Some time ago, a man said to me: "The ancients had their saints too; the difference is just that theirs were made of stone and they were very ugly. Our saints at least look like human beings." And you should see the collection they have here in the village church. Cheap dolls from a cheap bazaar have been placed upon the altar. To me it seems that the words of the scripture, "God created man in His own image", could be rephrased as: "Man created god in his own image".

The Maya had both man and animal gods, as well as composites of both. — But I dare say I bounce off track all the time. — Close to the burial chamber in question, we found a pyramid, a little temple in ruins and no fewer than eight subterranean chambers and corridors, some of the chambers quite impressive in size.

February 10, 1923.

In the mornings I rise with the sun, and after a bath in the Otolum creek, I begin the day's work. Once or twice a week I undertake a search in the forests. I seek and

map out new ruins, and I usually get a couple of pheasants or other game on these trips. My men work at clearing the dense scrub on the ruins. I survey or draw, every man must follow me in his turn. In the beginning they were rather apathetic towards the ruins and couldn't understand why the government would spend money on repairing them, but now they've become quite eager at searching and digging. I explain a few things to them, and they begin to realize that it does make some sense after all.

My neighbors, an Indian family, take care of my daily necessities. It is funny how long it takes for the Indians to grow accustomed to strangers, but as soon as they realize that you mean them no harm, they are quite touching in their care. They are used to being bullied, and as I see to it that their houses are in good shape, I give them medicine when they are ill, and I don't bawl them out from morning till night, I have gained their confidence.

February 15, 1923.

Quite a crowd of ladies today! Around ten, Mrs. R. [Ra-teike] from Palenque village arrived with a few lady friends, a couple of them Mexican and one American. Plus a couple of Indian boys with picnic baskets, a whole little procession; they took up quite a bit of room in my little hut, sat on my camp bed and on benches and crates, tired from the hard ride on horseback.

I have somehow lost the habit of entertaining ladies, in Mexico [City] I don't usually know what to say to them, but here it is easier, since they come to see the ruins and hear about them. After they had recovered their breath, we commenced our tour of the ruins. To come out here from Palenque and want to return on the same day is quite a tough job, since it is usually towards the hottest hours at noon that you have to trudge around and climb up and down the steep pyramids.

Right now all the paths are nicely cleared, so it's not too bad; furthermore I was quite gentle with them. Still, they looked more than tired enough when we were half way through, and the stony pyramid slopes did not help things.

The Mexican ladies, the daughters of a big landowner at Montecristo, wore little high-heeled shoes. But it got too difficult for them climbing down the pyramid of the Temple of the Law [i.e. the Temple of the Inscriptions]; they sat down, took off their shoes, and were better off in their stocking feet. Finally we had made it back, and they were all quite relieved when we sat down in my hut again.

Food came on the table, and this helped remedy their fatigue. It was quite strange to sit alone at a table with a swarm of ladies.

I was quite amused by the company. They had a good look around, and I wonder what they were thinking. Under the primitive circumstances, I've furnished my hut

as well as possible to my taste, and I actually find it quite cosy. The guests looked at the whole thing as people who visit a Negro village at an exhibition.

When they had once more rested a bit, looked at my books and peeped into my little museum, they left around 3:30 in the afternoon. An amusing little breath of air from the outside world.

February 19, 1923.

The rain is pouring down; this is what we would call real November weather back home in Denmark. Now and then the rain ceases, and banks of fog come drifting down along the mountain ravines, hiding temples and buildings.

Ordinarily the Otolum creek is a peaceable little idyllic mountain stream, but when the rain comes it swells into a furious river in a few moments, only to shrink just as quickly when the rain ceases.

The rain brings the cold; that is, cold compared to what I'm used to by now. Everything is clammy and damp. This tropical humidity is irritating; your books, your clothes and your footwear get moldy and musty, your mood gets sulky, and your weapons rust.

I should really be thankful for the rain and use the opportunity to work on my report; I have indeed spent the whole morning on it, but by now I've just had enough of it. Furthermore it is Sunday, and I try to talk myself into getting some rest. But resting, lying on your back and just staring quickly bores me. So I repaired my clothes and my boots for a while, but that too came to an end.

Dinner came on the table and was eaten, pheasant roasted the Indian way. After drawing the bird, they put a couple of well heated stones inside it, then it is rolled in

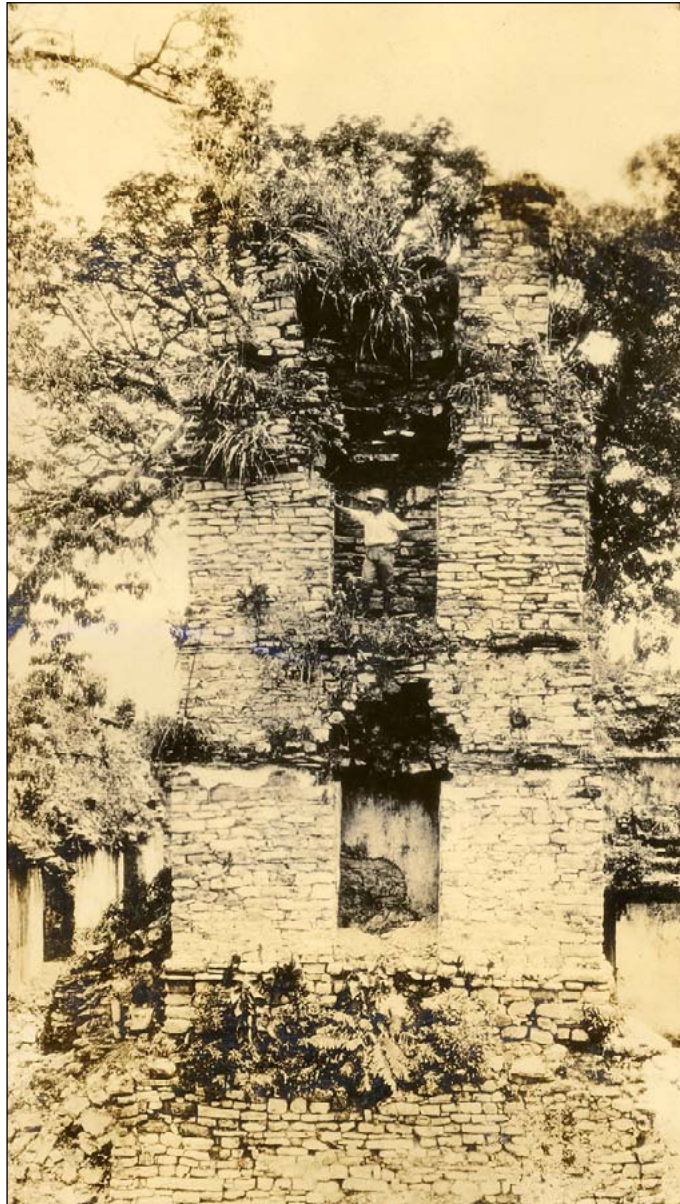


Figure 2. The Palace, Palenque, 1922-23. Photo by Frans Blom, from the M.A.R.I. typescript. Courtesy The Middle American Research Institute, Tulane University, New Orleans.

clay with feathers and all, and then it is placed in the middle of the kitchen fire. When the crust is as hard as a clay pot, they break it off. The feathers come right off with the crust, and the meat is juicy and tender.

I stand on ceremony and always dine with a table cloth on the table. Likewise, I always change my clothes every afternoon at the end of the day's work. Some—or even most people—might think this to be unnecessary when walking around all by yourself. I, however, feel quite some satisfaction every afternoon when kicking off my big, heavy boots, peeling the work clothes off my body and putting on a nice, clean change of clothes.

The rain brings out the snakes. It is quite amusing that the Maya worshipped the serpents and connected them with rain. They were keen observers of nature, as shown by their representation of animals and by their astronomy; and thus they probably thought serpents to be connected with rain as snakes were always to be seen in rainy weather.

I have made a new discovery: a frieze with a long inscription. I excavated it a couple of days ago and now toil at deciphering it. As only very few of the Maya hieroglyphs are known, I do this with quite some difficulty.

The howler monkeys do not like the rain. There is a family living in some trees close to the Palace, and as soon as the rain clouds gather they begin to howl and bark, they make an infernal concert. Well, I'm sure it can't be all that funny to hang by the end of your tail in a mahogany tree and just get wet.

To be concluded in the next PARI Journal.



Neg. No. 10313, Courtesy of the Museum of New Mexico.

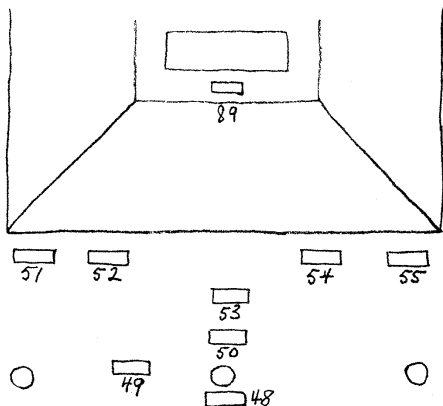
Morley's Diary, 1932

Editor's note

A leading archaeologist of his time, Sylvanus Griswold Morley was an Associate of the Carnegie Institution of Washington, the foremost organization excavating archaeological sites in Mexico, Guatemala and Honduras in the early part of the twentieth century. This diary continues his account of the Carnegie Institution's expedition to Calakmul begun on April 3, 1932. Morley's professional companions were his wife Frances, Karl Rupert, John Bolles and Gustav Stromsvic. Reference is made to biologist Cyrus L. Lundell, who conducted the first scientific investigations at Calakmul and brought the site to the attention of the Carnegie Institution.

April 18 - Monday

This morning Gustav and I worked at Group A, or rather Structure A. The monuments associated with this building are as follows:



I may anticipate a little by saying that of these 9 stelae, all but 48, 49, and 50 seem to have been dedicated in 9.15.0.0.0. They are carved on unusually hard limestone for this site and are beyond doubt the finest stelae in the city. It is as though same master had carved them all.

Well work was begun on Stela 51 and 52. The former had fallen forward on its face but the magnificent sculpturing of the glyphs on the sides gave promise of something exceptional below. Stela 52 was standing but a great tree growing behind it had thrown roots around the base and these roots had to be cut out.

The Initial Series on the left aide of the monument is beautifully clear 9.14.19.5.0 4 Ahau 18 Muan, just 1 tzolkin (260 days) before the end of Katun 15. Exactly this same date is recorded by the Initial Series on Stela A at Copan.

While some of Gustav's men were digging along the sides of Stela 51 getting it ready to turn this afternoon while Karl turns the crank of the movie, others were digging around Stela 53, the sides of which were plain. This also had fallen face forward and Gustav was very doubtful about its having sculpturing on the under side. But this time he was mistaken.

It was not large but the relief was magnificent, superlative. The figure holds a spear in its right hand and in his left a small round shield which has cross bands across it and one can see through the corners viz.

The carving is beautiful and altogether we were greatly pleased. The shaft is broken off at the level of the knees, and Lino Paat was put to work excavating just behind this upper



part to see if he could locate the lower part of the shaft which must carry the feet of this figure.

In the meantime our two axmen, Isidro and Rafael, were making a great well of light in the forest. The pictures we will take here are to be afternoon ones. It is a great patch of blue sky closed in by forest on all aides.

From this beautiful Stela 53 we turned our attention next to Stela 50, a small insignificant monument, which had glyphs on its narrow sides. It had fallen on its face and though we hadn't too much hope we turned it.

A week ago Sunday when we had made our preliminary tour of inspection we had turned another small monument, Stela 49, standing next Stela 50, and it had had nothing on it.

We were not disappointed with Stela 50 this morning however; it has a figure on it facing to the observer's left but very much cruder than the five beautiful stelae behind it. At first I thought the figure was sitting but in the end came to the conclusion it was standing. The waist is greatly constricted though a bar passes just below the waist which reaches almost across the shaft. One point that was of especial interest in connection with this small monument was the red paint which still adhered to it in many places. This was not the usual dark maroon red but a lighter much brighter red. It must have been a lovely color when it was fresh.

By the time these monuments were turned and Stela 51 prepared for turning after luncheon, eleven had come around and it was time to call off work for the morning.


Frances and Jose Carmen had come up about ten and she went back with me. John's trails became confused just northeast of Structure B and what with the blocking of them by trees I had had felled we had some difficulty breaking through to the main trail running from Central Buenfils south through here to La Fama and thence on to Sacaté, Uaxactun, and El Cayo in British Honduras.


While we were at lunch Jesus Garcia came in with two faisán, a rather gamey bird common to the bush. He had killed a pair, male and female. He had been out looking for Lundell's lost last monument and had failed to find it. He thinks that Lundell was confused and saw a fallen monument—our Stela 94—on the south side of a mound, incorrectly describing it as standing on the west side of a mound. While we have found Lundell's map correct in every respect, it seems as though in this one respect he may have made a mistake. John has made lines through this general section, Jesus has been through here three different times and Victor Audinette also did some montearing through here. None of them, however, has found a single monument standing on the west side of a mound. John found another new stela today which I am calling provisionally No. 93. It is just south of Stela 47.

With the moving picture camera, Karl, his two men (Tarsisio and Francisco), Frances, her boy, Jose, Garcia, Gustav, myself and all our crew repaired to Structure A

where the turning of Stela 51 was gotten under way.

From the first this monument proved troublesome. To begin with it is an enormous shaft of stone 13 1/2 feet long, 5 feet 1 inch wide, and 1 foot 2 inches thick. To be sure he has raised larger stelae but the earth under this one was so soft that neither the jacks nor the rocks upon which they rested could get a good firm purchase below.

 Gradually he got it up bit by bit until it was inclined about 70° with the horizontal. At this point by assembling all hands—some ten men—he tried to get it up the remaining 20° by all pushing it at once but it never budged.

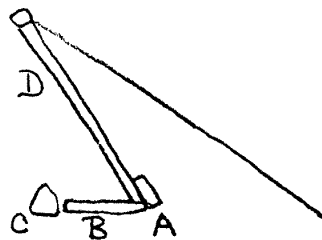
While he was getting ready his next device which involved the use of a pole some 25 feet long, we examined the relief. It is a beauty, the best we have found so far. The nose of the figure is slightly damaged but the details of the carving are exquisite. Frances noticed an elaborate curling of the hair  almost like an elaborate Egyptian wig.

The glyphs are in mint condition, in fact most of the relief may be described as in mint state.


It was too dangerous looking under this great slab resting as it was on the jacks and a few slender poles so we decided to wait a few minutes longer when it would be up.

Karl had taken movies at various steps: felling trees, placing the jacks, raising the slab with poles etc., and had saved about 15 feet for the final cleaned slab.

Gustav's plan was a good one. A great pole 25 feet high, D, was raised against the under side of the stela, A; this pole was fitted into a heavy forked piece of wood, B, which was backed against a stump, C. The forked piece of wood serving to keep the butt of the pole D, from slipping either way. A cable was tied to the upper



end of the pole and then the force pulled on the cable. Slowly the stela rose until it was vertical and resting easily against a stout short pole, which had been provided to keep it from going all the way over.

 On the side we had been lifting it, i.e. to the left in the above sketch, three poles kept it from falling back. It was just right and then an ugly thing happened.

When the crew at the end of the cable saw that the stela was up, they let the rope go slack, the pole tottered and then crashed to the ground parallel with the stela, knocking out at the same time the three props on the left side, and there before our eyes two hours arduous labor in the boiling sun went instantly for naught, the monument toppled over on its face again, which was that.

It was a great disappointment for us all. For one minute, no perhaps 30 seconds, we saw the sculpture in a magnificent slanting light and then it toppled over. And in boiling, broiling white sun too.

No more movies today. Karl, with his two men, and Frances went back to camp and all this work was to be done over again.

I went to work on Stela 52 and picked up a Secondary Series on the right side which was within 100 days of the Initial Series on the left side, viz.

9.14.19.13. 0 8 Ahau 13 Tzec
2.14
9.14.19.15.14 10 Ix 7 Mol
2. 6
9.15. 0. 0. 0 4 Ahau 13 Yax

In the meantime Isidro and Rafael had been felling trees over to the south near the fallen Stela 55, and in the better light that fell athwart it, I was able to pick up our 44th Initial Series, recorded on the left side, 9.15.0.0.0 4 Ahau 13 Yax.

I came home about 4:00 though Gustav stayed on for another hour, getting Stela 51 nearly up he reported when he came in.

This has been the hottest day we've had, and all the canteens were empty by dinner time, sure indication of the temperature.

After dinner, while I was writing up the entry for the day in this diary, Frances and John played against Karl and Gustav at auction. I also tended the phonograph spasmodically. Bed a little after eight.

April 19 - Tuesday

The moon should be full tonight or tomorrow. Which will make it rise about 11 on Monday or Tuesday when we will be going out. The drivers of the trucks as well as of the platformas prefer night driving to day driving at this time of year because of the pest of flies.

Our work took us again to the group of stelae in front of Structure A. Gustav had not finished getting Stela 51 on it edge, but a half hour's work on this monument put it right for a good afternoon picture.

I had my boy Genaro rig up a pole and rope ladder and sent him to the top to clean off all the ashes Lundell had put on Stela 52, I suppose in the nature of a distemper for his photographs. Jesus Garcia says he had no brush with him and had to resort to this expedient to get any picture at all.

When Gustav finished with Stela 51 he moved his gang over to Stela 55 but he himself stopped at the little middle monument, Stela 53, the butt of which had been found in situ. This we excavated and assembled it with the longer larger upper part. This monument begins

with the date 4 Ahau 13 Yax, the Initial Series of which is 9.15.0.0.0 as used here.

While we were at work on Stela 55 Frances came up, and together we went over to study the beautiful Stela 51. The date on the front of this is 10 Ahau 13 Chen just 1 uinal before the dedicatory date, i.e. 9.14.19.17.0 10 Ahau 13 Chen.

The design on the front of Stela 55 had flaked off somewhat but one could distinguish still a large figure facing to the left.

The dedicatory date 4 Ahau 13 Yax is probably repeated in the two first glyphs also on Stela 55.

When this monument was finished Gustav transferred his gang to Stela 54. This was also dedicated in 9.15.0.0.0. The stone of which it had been made was very hard but lay in strata which were not strongly cemented together, with the result that the different layers of the monument had come apart. The raising of this, and more the fitting together of the pieces, was a rompecabezas on a grand scale—a giant picture puzzle.

While this was going forward Frances and I took my Genaro and Demetrio to Stela 48, off the terrace but directly in front of Structure A and Stelae 48 and 50. I put Genaro digging along one side and Demetrio the other, and literally while we were waiting they uncovered our 45th Initial Series. Frances' quick eyes caught this first. Katun 15 was the sign that gave it away.

Further excavation yielded the Initial Series introducing glyph, the uinals and the day 4 Ahau. The whole upper part of this fallen monument had scaled away in small flakes taking with it most of the left column of glyphs, i.e. the left half of the introducing glyph, the bak-tuns, the tuns, and the kins. With the katuns being 15, the uinals 0, and the day of the Initial Series terminal date, 4 Ahau, I was able to decipher the whole Initial Series as 9.15.0.0.0 4 Ahau 13 Yax.

This makes the seventh stela we have found dedicated on this important katun ending. In fact I believe Structure A must have been dedicated at this time.

I was delighted to get this new Initial Series as I thought we must have about exhausted the possibilities of the site in this respect. As I mentioned it is our 45th and I was doubly happy that Frances had found it.

Gustav only had the main part of Stela 54 raised at 11:00 and leaving it well propped up went to lunch.

It was a scorching hot day and we were all wringing wet by the time we got back to camp. Gustav is seedy, a pain in his right side; I am afraid he must have strained a muscle with all the lifting he did yesterday. It was hot at luncheon, but afterwards in the oven that the terrace in front of Structure A became in the white heat of the afternoon, it was hell nothing else.

Gustav got the upper half of the monument up and then with great difficulty assembled the fragments of the lower two-thirds.

Some of the fragments are exquisitely carved, and in general our assemblage gives a fairly good idea of the entire composition with some parts missing. The Initial Series terminal date 4 Ahau 13 Yax is repeated as the first two glyphs on the front.

It was boiling hot and I spent my time between this reassembling on Stela 54 and on the digging along Stela 48. One other satisfactory item came up: the variable central element of the introducing glyph is the half Venus sign which is the form of that glyph corresponding with the month Yax.



The assembling of Stela 54 was finished at 4:00. Gustav's cuadrilla had worked like slaves under a white heat and I thought they had a day coming to them then and there, so I called it a day and we all tramped back to camp.

Frances had a hot bath waiting for me and it was restful and soothing at the same time, until I felt my fatigue slipping from me like an old garment.

After bathing I made up our photographic schedule, i.e. what monuments are to be taken in the morning and what in the afternoon.

After supper while I was writing up the entry of the day, Frances and John played Karl and Gustav at auction. The boys came up from the aguada about eight of them, and Tarsisio gave them a phonograph concert. They sat around on the ground and seemed to enjoy it. We went to bed a little after eight.

April 20 - Wednesday

This morning we first went to Stelae 47 and 93, two small monuments—at least they looked small on the ground—east of Structure B. We left Jesus and Demetrio to dig these out while we continued with the main gang to Stela 48.

This monument is the one Frances found an I. S. on yesterday, our 45th. The I. S. is on the right side facing the monument and the mound in front of which it stood, and this, as noted yesterday, reads 9.15.0.0.0. It seemed that the sculpture on the front or exposed upper surface has entirely flaked off. I thought that it might be worth while to turn this monument over to see if there had been a design on the back or down side.

This had broken in three pieces and Gustav turned his attentions to the middle piece first.

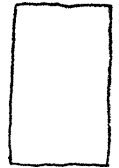
In order to turn this it was necessary to bring down a dead limb of a tree. When this was felled it was found to harbor a veritable metropolis of tree ants, and all the rest of the time we were working on this monument, we were covered with these pests. They bit too and when squeezed smelled of formic acid to high heaven.

When this monument was turned we found it had a human figure facing to the observer's left in very low relief, little more than incised.

There is some evidence that Stela 48 had never been finished. In the first place the inscription on the left side seems to be incomplete only the first 5 or 6 glyph-blocks are carved.

In the second place there are two glyphs in the upper left corner on the front which have had the panel prepared for them but which have never been carved.

The relief is so low as to be little more than incised. The right hand is extended down in front of the body as though the figure were sowing corn. The other hand is in much the same position. The fingers are noticeably elongated on both hands. Gustav said they were quite aristocratic.



It was getting on for nine when we finished with Stela 48 and moved back to the row of monuments on the terrace from which the lofty Structure A rises.

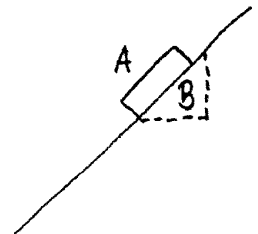
Gustav moved the cuadrilla and all its implements, shovels, picks, axes, jacks, rope, etc. up to the top of the lofty pyramid, while I stayed for a moment with my boy Genaro measuring Stela 54.

The ascent is very steep at least 45 degrees perhaps more, indeed if it were not for the trees which grow on its steep sides one could hardly reach the summit.

When I got to the top the boys were already at work digging off the blanket of roots, leaves, and soil which had accumulated on the upper surface of Stela 89. This had fallen forward on its face and had slid down the slope a few meters below the place it had stood originally—i.e. on the summit above.

The turning of this monument offered a new problem to Gustav's ingenuity. It lay on a very steep slope, and it would have taken very little to send it crashing to the bottom.

Gustav's plan for turning this was simplicity itself and proved in the afternoon most efficacious. He put his gang to work digging in along the right side of the stela at the level of its lowest point. His idea was then when this trench had been driven into the pyramid the length of the monument, it (the stela) could be pushed over into it. In this sketch, A is the stela on the slope and B the triangular section he moved out. This piece of work could not be accomplished in the forenoon but before 11:00 he had made great headway on it.



The I. S. on the left side which Karl read correctly when he discovered Stela 89 last Saturday is 9.15.0.0.14, i.e. 14 days after the End of Katun 14.

This reaches the day 5 Ix 7 Zac and a Sec. Series of 2 days declared by the very unusual inverted Ahau sign with a coef. of 2 over it. This should carry the count to the day 7 Cib 9 Zac, but 10 Zac is incorrectly recorded in-

stead.

This error in the original curiously enough, to anticipate slightly, is repeated on the front of this monument where the date 7 Cib 10 Zac—an impossible condition in the Maya calendar—is surely recorded.

There is a Sec. Series of 6.2.14 on the right side near the bottom and then the "4 Ahau 13 Yax, End of Katun 15". This last is doubtless the dedicatory date of the stela.

Eleven o'clock came before we realized and leaving all our tools on the summit of the pyramid, we descended for lunch.

Gustav thought that we would be ready to turn the stela a little after two, when Karl said he would come up to take some movies of the event.

When we set out after lunch we had three cameras—the large 5 x 7, the 3 1/2 x 5 1/2, and Proc's Verascope, and the latter, believe me, is a little devil to get under way—so many damn gadgets to get fixed and attended to before the picture can be taken.

When Karl came up about two he brought the movie camera with him making four photographic outfits to record the event.

But to go back. This was Frances' first ascent of Structure A and we went clear to the summit. A pale blue haze hung low on the horizon all around, milpa smoke. I thought in this remote spot we were even beyond milpas, but as Jesus aptly observed, "humo viaje lejos, "smoke travels far".

She was struck by the different flora on the summit of the mound—so much wild hennequen, even some Spanish moss.

Frances found a lovely bright red flower, which she plucked and wore; it was her mother's birthday.

After we had rested on the top for awhile, catching a few vagrant breezes, we went down to Gustav's operations a few meters below.

By this time Stela 89 was very nearly ready to turn. I finished my notes on the right side which was to be turned down and then Frances took this side with the 5 x 7 and I tried to load the Verascope but what business. I couldn't load the blistering thing, and just then we heard Karl bellowing at the base of the hill. He called up not to throw any stones down while he was coming up.

He reached the top pretty winded and hot. It was plenty hot too up there. The sweat just pouring off us as we were manipulating the damn cameras.

Between us we managed to load the Verascope, and then the three no the four cameras recorded the raising of this stela. As it came up we could see that it had a magnificent figure on the under side.

The principal figure faces the observer's left. He holds in his right hand a beautifully executed Manikin Scepter and in his left a round shield. There is a subsidiary figure in the lower left corner. The first two glyphs in the upper

left corner are 7 Cib 10 Zac again repeating the error on the other side. These should be 7 Cib 9 Zac.

By the time this monument was finally turned and cleaned, it was too late to photograph. It was about 4:30 and the boys had put in a hard day's work on the summit of that blazing pyramid.

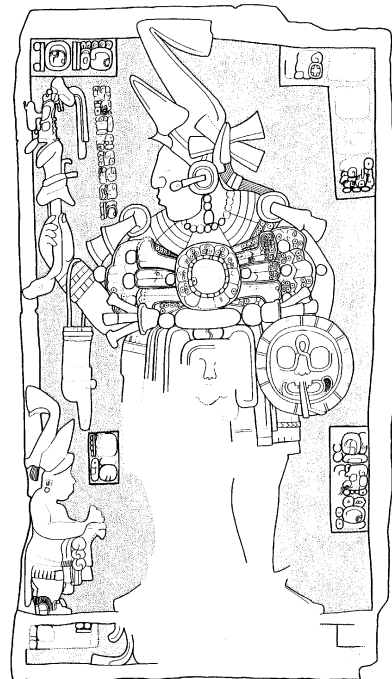
At one time we were 13 people up there, probably more human beings on this pyramid than had been here for the past thousand years and what a different gathering from the last. Then perhaps some final ceremony, some last rite to offended deities before the city was finally abandoned, while this afternoon, people of a different race, color, and nationality were raising a monument the earlier group had erected in the long forgotten past. It was a vivid contrast.

We descended and returned to camp. The work of turning monuments is about over. Stela 94 and 95, and raising Stela 8 a little more and that is all. Gustav will do this by himself in the morning while Frances and I go out to photograph in the morning.

My notes on the monuments are about done too. Stelae 43, 36 and 37 are the last.

After supper we half expected to see the boys up for another phonograph concert but I guess they were pretty well burned out by the heat of the day and the arduousness of their labors.

The same quartette played auction while I wrote up the day's entry. It threatened rain, thunder in the distance, but nothing materialized. Bed about eight.



Calakmul Stela 89. Drawing by Nikolai Grube.