

## Photographic Clarification of Lord Jaguar's Birthday and the P4 Glyph on Tortuguero Monument 6

John Major Jenkins. June 16, 2011

The results of a visit to the Carlos Pellicer Museum on March 28, 2011 to examine Tortuguero Monument 6. Includes new photographs by the author. © 2011. This research published at *The Center for 2012 Studies*. <http://thecenterfor2012studies.com>



In March of 2011 I was able to examine Tortuguero Monument 6 and succeeded in resolving questions about two different glyph areas of the inscription (see Figure 1 below). The task was a difficult undertaking, and began as an extraordinary proposition, because the Carlos Pellicer Museum in Villahermosa experienced a flood in 2007, has been undergoing renovations, and Monument 6 has been in storage since then. The museum is currently closed. The prospect of examining this important monument and resolving these questions was fortunately supported by Shannon Kring-Buset of

Wildheart Vision Films, and was officially approved and facilitated by the directors of the Carlos Pellicer Museum.

Joining me at the museum on March 28 was Maya scholar [Christopher Powell](#), resident of Villahermosa and author of research into Maya archaeoastronomy, astronumerology, and calendrics. It was a typical sweltering day in the Gulf Coast region of Tabasco state and the museum was not air-conditioned. The monument had been brought out of storage and placed on a table in a large well-lit room, covered in a clean white sheet. As they drew back the covering, my initial impression was that it was smaller than I imagined it would be. The current state of the monument is incomplete. Two small pieces in the right flange were sold at auction, whereabouts currently unknown. The large middle section of the central panel of the inscription currently resides in the Metropolitan Museum of Art in New York City, and [can be viewed here](#). The entire left flange is missing and was never documented, as far as current research has shown.

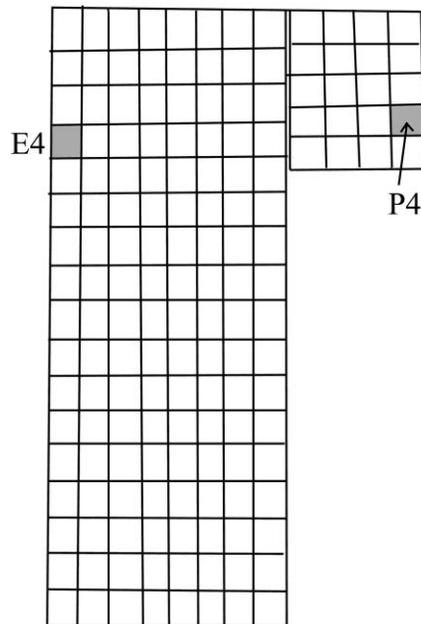


Figure 1. Outline of Tortuguero Monument 6 and the areas of examination: E4 and P4.

It is unknown whether there are archival records of an excavation of the Tortuguero site from the time of Monument 6's recovery, perhaps including reports and photos. It is possible that the left flange, if nicely preserved and probably containing visually interesting Introductory Series glyphs, was claimed by someone. It may still reside in one of the several private collections in the region — in Macuspana or Villahermosa. One of the missing pieces of the right flange includes part of the bottom portion of the important P4 glyph, which reveals the verb-action associated with the 13.0.0.0, 4 Ajaw 3 K'an'kin period-ending date (December 21, 2012 according to the 584283 GMT correlation). Luckily, most of the P4 glyph-block remains in the existing piece, and although photography conditions were not ideal, I secured a good close-up of this glyph-block. First, I'd like to address a question that arose during the debate over my *Society for American Archaeology* paper (April 2010) that was sponsored in late 2010 by the *Maya Exploration Center* (see Jenkins 2011; [the PDF is here](#)).

## Lord Jaguar's Birthday

The importance of the missing and never documented left flange is that with it we could ascertain the precise day of Lord Jaguar's birth. As it is, his birthday can be narrowed down to a 5-day range in the following way. A Distance Number partially survives at E4-F4-E5 in the main panel, and to calculate his birthday we can subtract that DN from the known date of his accession in 644 AD. The 5-day ambiguity stems from part of the K'in portion of the DN (at E4) being chipped off (see Fig. 16 on page 44 of Gronemeyer and MacLeod 2010: [http://www.wayeb.org/notes/wayeb\\_notes0034.pdf](http://www.wayeb.org/notes/wayeb_notes0034.pdf), and Photo Sequence #1 below). His birthday could thus be one of the following five options:

K'in portion of DN	Resulting tzolkin/haab	Resulting birthday (Julian)
10 (two bars)	12 Ajaw 8 K'an'kin	November 28, 612 AD
9 (one bar, 4 dots)	13 Imix 9 K'an'kin	November 29, 612 AD
8 (one bar, 3 dots)	1 Ik' 10 K'an'kin	November 30, 612 AD
7 (one bar, 2 dots)	2 Akbal 11 K'an'kin	December 1, 612 AD
6 (one bar, 1 dot)	3 Kan 12 K'an'kin	December 2, 612 AD

*Chart 1. The five possible days of Lord Jaguar's birth. All dates are Julian.*

Because of the width of the surviving vertical bar, and the remaining space to the left of it, there is not enough space for more than one additional bar OR 1-4 dots. Similarly, the compositional space, running from the surviving bar to the left edge of the monument, was clearly intended to be occupied and thus no bars or dots is equally unlikely. See Photo Sequence # 1 (below). If one measures the width of the surviving vertical bar and places a replica of it to the left, the space is nicely filled to the left edge of the monument, allowing for the requisite blank space to the edge as indicated by the border space next to the glyphs above and below. This doesn't prove that a bar was used, because 1-4 dots (arranged vertically) would also occupy the same space. However, for reasons I'll explain, a bar may be more likely than dots.



*Photo Sequence #1, image 1. Photo of glyph-block E4 showing the surviving vertical bar of the K in portion of the Distance Number, and the missing part to the left. The stucco covering has chipped off in a near-uniform lengthwise wedge.*



*Photo Sequence #1, image 2. Photo of glyph-block E4 from a different angle.*



*Photo Sequence #1, image 3 (above). Photo of glyph-block E4, slightly zoomed out*



*Photo sequence #1, image 4. Looking straight down. This final photo gives an indication of the space available for additional bars or dots, as well as the trough between the surviving bar and the missing part (indicated by the red arrow). Photos by the author.*

One can compare the width of the bar and the scribe's compositional strategy of other bars elsewhere in the inscription, and determine that the rather wide vertical bar in E4 was intended to bring the K'in portion up to the left edge of the monument with the addition of only one more column, occupied by either one bar of equal size or 1-4 dots. Thus results the maximum possible 5-day range given in Chart 1 above. In other words, although at the fringe of remote possibility one might imagine enough space for two very narrow vertical bars in addition to the remaining wide one, it doesn't make sense that the scribe composing the DN would make the first vertical bar quite wide and leave only enough space for two very thin additional bars, or one additional thin bar and another column of abnormally small dots. In this way a rational analysis can be applied based upon the material evidence supplied by these close-up photographs.

The primary question to resolve in my examination of Monument 6 involved whether there might be any kind of additional evidence to reconstruct an accurate Distance Number. I thus closely examined the E4 glyph block. The close-up photographs clearly show that there are no remaining nubs of dots that might clarify the Distance Number, which I confirmed after close eyeball-to-glyph examination. But other factors can be considered. One can see that the middling-top part of the vertical bar is chipped away, with the very top part of the bar intact. We should not be deceived by what appears to be a dot above and to the left of the upper part of the vertical bar, as this belongs to the glyph-block above. The inscribed surface, as one can see, is a fine cement stucco laid over the stone. The chipping off of the rest of the K'in DN to the left of the surviving bar happened more or less cleanly. I suspected that if there were dots affixed next to the bar, they would probably more or less merge with the bar (as on some other examples elsewhere in the text), and a clean break would be less likely than if there was simply another bar separated from the nearby bar with a straight-cut depression or trough. In that case, one can imagine the stucco separating cleanly like two wedges of a Kit-Kat chocolate bar. In addition, taking a close look at the last image in Photo Sequence #1 (above), which looks down on the E4 glyph directly from above, one can see the cleft "trough" in the stucco just next to the bar. There is no indication of nubs of dots merging into the bar as we see on *some*, but not all, other examples of dots and bars, such as the following glyph block (Figure 2; see especially the top dot on the upper left):



*Figure 2. Glyph-block I3. The areas between the dots and the bar have less of a declivity than open areas. The declivity between two bars would be of uniform depth, as appears evident in the declivity that survives next to the bar in glyph-block E4. Photo by the author.*

The observable width of the trough on the broken K' in DN of E4, before the stucco splits, is fairly substantially, and no dots are pressed up against the surviving bar. If my observations have merit, then there is a good possibility that a bar split off and the K' in portion of the DN would be "10" (two bars). Lord Jaguar's birthday would therefore be November 28, 612 AD (Julian), 12 Ajaw in the 260-day calendar. Notice, however, that

the surviving bar in E4 is partly damaged toward its top and the break in fact did not occur cleanly, suggesting that perhaps there was a dot in that location. But a dot in that particular location would be part of a two-dot or four-dot construct, and we don't see evidence for dot nubs in the lower area of the trough to the left of the bar, so the damaged part of the surviving bar probably is not related to dots in the DN. Because of the variations in the placements of the dots and bars in other examples, where in some cases there is significant spacing between a bar and nearby dots, the argument is not rigorously supported by all other examples from other parts of the inscription. Nevertheless, my proposal of a two-bar K' in portion of the DN is a good possibility.

If these observations are on target, and the November 28 (12 Ajaw) birthday has something to recommend it, it may be significant that a 12 Ajaw date is recorded on the Tortuguero jade ear-spool, corresponding to December 17, 639 AD (9.10.7.0.0, one day from the solstice). The other dates on this ear-spool include Lord Jaguar's accession date. In addition, the K'atun ending of 9.11.0.0.0 (October 9, 652) also falls on a 12 Ajaw day and is recorded on Tortuguero Monument 1. Lord Jaguar's contemporary from nearby Palenque, Janaab Pakal, was born on an 8 Ajaw day — Ajaw days being providential birthdays for Maya kings. Curiously, both of these neighbor-kings died on a 6 Edznab day (Lord Jaguar in 679 AD and Pakal in 683 AD), suggesting some kind of calendrical parallelism in their lives, whether providential or contrived. They were also both "5 Katun" kings, and unlike other Maya kings they both referenced VERY far-future period endings in the Long Count in order to accentuate their royal status. Pakal invoked the 20<sup>th</sup> Bak'tun ending in 4772 AD, while Lord Jaguar referenced the 13<sup>th</sup> Bak'tun period ending in 2012. (None of this mitigates the astronomical thesis I've proposed about the 2012 date; for more on this see Jenkins 1998, 2010, 2011:75.)

Another good option for Lord Jaguar's birthday, which was mentioned in my *Society of American Archaeology* presentation on April 15, 2010 (in Jenkins 2011:18), is derived from the original T-shape of the monument. This option is November 30<sup>th</sup>, 612 AD. Monument 6 is essentially a biography of Lord Jaguar, containing his birthday, accession, war triumphs, a sanctuary building dedication, and lineage rituals providing important rhetorical affirmations of his rule. The monument was dedicated and installed in a sanctuary building in 669 AD, ten years before his death at age 66, and so it does not mention his death. Here's the key that I think makes the November 30<sup>th</sup> option compelling: the T-shape of the monument evokes the Ik' day-sign glyph, which relates to breath, life-force, and kingly power. This may be a hint that he was born on November 30, 612 AD because that date falls on 1 Ik' in the 260-day calendar. This date requires that three dots were placed to the left of the vertical bar.

I discovered in my research recently that others have noted the significance of the T-shape of Monument 6, evocative of the Ik' day-sign. Arellano (2006:102), for example, noted that Berthold Riese found this T-shape to be evocative of the Ik' day-sign. Some have suggested that the monument looks more like a huipil dress worn by Maya women. This opinion may derive from the overall appearance of the monument as laid out and previously displayed and photographed in the Carlos Pellicer Museum. In recent configurations, the surviving right flange fragment was placed inappropriately close to

the main section, giving a skewed appearance. I confirmed during my visit that the two flanges were originally conceived as unattached to the main section and the Maya may have installed them slightly apart from the main section, hung separately on a back wall while the central section was set into the ground against the back wall of the shrine, thus slightly increasing the horizontal dimension of the monument. The apparent length of the main section is deceptive, as the bottom portion is uncarved and was probably intended to be set into the ground. There is even a stain line that suggests partial burial. The actual dimensions of the displayed monument, as it originally appeared in the temple building, would have had dimensions much more closely akin to a typical Ik' portal or day-sign than a quick glance suggests. I reconstructed the installed appearance of Tortuguero Monument 6 and performed a comparative survey of the Ik' portals on the Palace at Palenque. They compare favorably to the reconstructed visual dimensions of Tortuguero Monument 6. More importantly, these and other Ik' portals and Ik' day-glyphs exhibit much variation in dimensional proportions, so the relevance of asserting a perceived resemblance to the proportions of a huipil in distinction to the proportions of an Ik' portal or Ik' day-glyph is very doubtful.

Furthermore, I know of no explanation offered as to why the shape of the Tortuguero monument should represent a huipil, whereas the Ik' day-sign, meaning life-spirit and breath (often of a king), has the merit of being the presentational frame of Lord Jaguar's life biography. It is thus, logically and understandably, framing and conveying the "essence" or "spirit" of his life, kingship, and legacy.

The importance of the Ik' day-sign for the calendar priests and royal elite of Tortuguero may also derive from its status in the local Calendar Round system. In Jenkins (2011:31-33) and in a forthcoming publication I discuss evidence that the Calendar Round system likely in use at Tortuguero utilized Type II year bearers, which includes Ik' as a year bearer. To recap briefly, I note David Stuart's work on the Haab seating at sites like Palenque (2005(2004)) and Gronemeyer's discussion of a Kaban seating of Pop at Comalcalco (2004:156), the possible successor to Tortuguero, strongly suggesting that Tortuguero would have also used Type II year-bearers, to which Ik' belongs. Ik' may have been the senior year-bearer, as it remains for some Highland Maya groups today, in which case it would inaugurate the 52-Haab Calendar Round and thus provide a calendrical analogy to 4 Ajaw, because these two tzolkin dates would each serve as a large period initiator in their respective systems (1 Ik' in the Calendar Round and 4 Ajaw in the Long Count). My proposal is strengthened by the fact that Lord Jaguar's birthday and the 4 Ajaw period-ending date in 2012 were placed in structural parallel, as the first date on the left flange opposite the last date on the right flange. Furthermore, the astronomical parallel between Lord Jaguar's birthday and the 2012 date, first noted by Michael Grofe (p.c. February 22, 2009, Jenkins 2009:269-270, Grofe in press), reinforces an intended parallel association. Based on these various data points and arguments I thus propose that the two most likely candidates for Lord Jaguar's birthday are November 28, 612 AD (12 Ajaw) and November 30, 612 AD (1 Ik').

The astronomical parallel between Lord Jaguar's birthday and the 2012 period ending is conceptually valid within the entire 5-day range because, as Grofe observes, any one of

the five dates is within three days of an exact sidereal-year parallel to the astronomical alignment that occurs on the 2012 period-ending date. (And three of the five are within one day.) The alignment that occurs on both Lord Jaguar's birthday and the 2012 period ending date is the alignment of the sidereal position of the sun with the Crossroads of the Milky Way and the ecliptic. This alignment is the centerpiece of my work to reconstruct the astronomical intention behind the solstice 2012 date (Jenkins 1998).

The birthday option that provides an *exact* astronomical parallel to 2012 (that is, the exact same sidereal position of the sun) is November 29. Either one of the two best candidates I propose is only one day away from this date. When the astronomical precision of these comparisons gets as close as one day, the invocation of absolute precision, as a make-or-break critique, becomes moot, because the sun shifts one degree every day and the sun at 2 a.m. on a given day might be closer to an expected astronomical parallel than the sun's position at 11 p.m. on the same day. In any case, a striking ability for precision in Sidereal and Tropical Year accounting is something the ancient Maya were clearly capable of (Grofe 2007, 2011). It is thus of great interest that Barb MacLeod noticed that the Sidereal Year interval between the 510 AD date and the 647 AD date on Tortuguero Monument 6, first noticed by Michael Grofe, provides a Sidereal Year value that is very close to the modern value, and which is also precisely replicated in the interval between the 2012 date and Lord Jaguar's birthday, IF his birthday fell on 1 Ik', November 30, 612 (see MacLeod's calculations and comments in Jenkins 2011:117-118, at [http://www.mayaexploration.org/pdf/MEC\\_Facebook\\_Discussion\\_2010\\_Jenkins.pdf](http://www.mayaexploration.org/pdf/MEC_Facebook_Discussion_2010_Jenkins.pdf)).

This is yet another item of support for the 1 Ik' date, assuming that a demonstrated Sidereal Year constant was being applied to multiple date-pairs. Evidence for this strategy of using the same Sidereal Year constant in multiple date pairs has been presented by Michael Grofe in his analysis of the Serpent Series in the post-Classic Dresden Codex (Grofe 2007) and in early Classic Period inscriptions (Grofe 2011).

My close examination of the E4 glyph-block has had useful results. On one hand we can eliminate the possibility of a definitive solution, and this is part of the process that a scientific investigation pursues. No nubs of dots could be identified. On the other hand, unexpected material evidence that was identified during my close scrutiny has resulted in informed deductions that suggest the prominence of a date (November 28) that I had previously not considered. I thus suggest that two dates have greater weight than the other three options. A comparative assessment of the width of the surviving bar and the remaining space and border of the area of the E4 glyph disconfirms the possibility of more than one additional bar (or 1-4 dots in the same space), and thus the K' in portion of the DN cannot be larger than 10. This is indicated clearly in the photos (above).

The effort of going to Villahermosa has also opened up other avenues of analysis and possibilities for relocating the missing left flange in local private collections, which may be a long shot but which also may be quite possible if the collective will exists. My analysis concludes that of the five possible dates for Lord Jaguar's birthday the two that have the most contextual evidence to recommend them are: November 30, 612 AD (1 Ik') and November 28, 612 AD (12 Ajaw). These dates are in the Julian calendar.

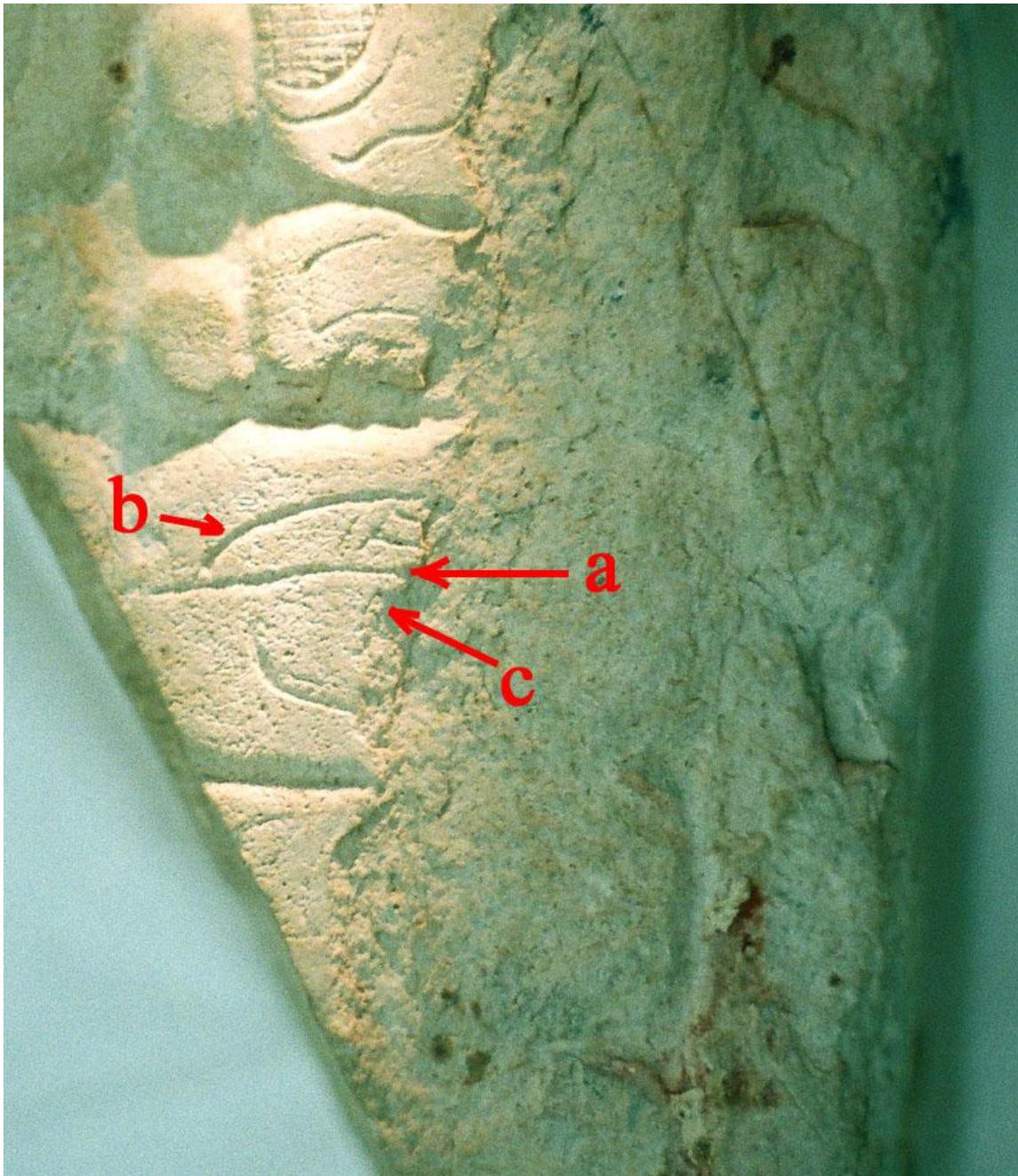
## The Verb Glyph at P4

Now we come to my photographic clarification of the remnant of the important glyph at P4. In the original drawing made by Ian Graham and published in Gronemeyer's study of Tortuguero (2006), the glyph appeared to contain cross-hatching and was thus thought by some, including Gronemeyer, to mean "black" or "darkness." Upon a closer examination of original photographs this has been shown to be incorrect, and a new composite photo of the right flange was subsequently prepared. The resulting revised line drawing was closely examined and utilized in a recent publication (Gronemeyer and MacLeod 2010:2) as the basis for epigraphic analysis. Gronemeyer and MacLeod (2010) consequently offer a revised reading of the epigraphic decipherment of the text immediately relevant to the 2012 date, with a special focus on the verb-action glyph at P4 being a YM1 expression. This reading completely revised Stuart's 2006 reading of "descent" (UT Mesoamerica and Aztlan e-lists, April 2006, see discussion in Jenkins 2009:217-222). The new reading of P4 involves a "seeing" or "witnessing." The other glyphs relate this witnessing to the "adornments" or the "wrapping" of the deity Bolon Yokte in his "great investiture" (Gronemeyer and MacLeod 2010:11-21, 34, 57). Because of the context of the narrative, Gronemeyer and MacLeod believe that in some sense Lord Jaguar intended himself to be present for the witnessing and the "investiture" rite (Ibid: 39; my own suggestion of this idea, from February 2009, was circulated in email). This indicates that *a future ceremony* was expected for the 2012 date, which Barb MacLeod characterizes as a "costume ball." The idea suggested by Houston (2008) and supported by Stuart (2011) that the text *does not refer to a future event* in 2012 is questioned and rejected by Gronemeyer and MacLeod on convincing epigraphic grounds (2010:21-23, see esp. bottom of p. 23).

My photograph of the P4 glyph reveals several variations in the actual configuration of the lines, which will be clear by comparing the line drawing in Gronemeyer and MacLeod (2010:2) with my photograph (Figures 3 and 4, below).



*Figure 3. Close-up of the P4 glyph-block. Notice the hooked form of the element just below the longest horizontal line. Photo by the author.*



*Figure 4. The larger space around the surviving portion of the P4 glyph, suggesting the full width of the P4 glyph-block. Photo by the author.*

The two slanted almost-vertical lines in the top section clearly do not meet the baseline (a); neither does the thicker arched line above (b), moving downward to the left. Below the long horizontal mid-line, the lines in the tiny fragment of a C-shaped hoop (c) do not appear to be uniform as depicted in the currently used line drawing. Rather, the bottom line of the hoop appears dramatically hooked. I confirmed this in a close visual examination. Nor does the top line of the C-shaped form (c) appear to run parallel to the long horizontal mid-line above (a). Although there is only a small portion of it remaining,

it rather seems to slant downward to the right, away from paralleling the horizontal mid-line above. See also Figure 6 at the end of this report. The photos used in this PDF are high resolution and readers can zoom-in for a closer view.

These variations may or may not be potentially important. In her 1992 workbook to the Austin Maya Meetings, Linda Schele mentioned that David Stuart revised his previous reading of a glyph because he had originally not noticed a tiny little nick. Carl Callaway mentioned to me that the details make all the difference in fleshing out a hieroglyphic decipherment. I provide here my photographs so that epigraphers can at least revise the currently used depictions (line-drawing and composite photograph in Gronemeyer and MacLeod 2010:2-3) and determine if a revised decipherment is called for. It is likely that the variations have more to do with scribal styling and the YM1 decipherment offered by Gronemeyer & MacLeod will not be affected. In any case, the scientific value of accurate depiction invites incorporating these new images into future renderings of the monument.

**One final observation.** As noted by Gronemeyer, the top portion of the monument is distinctly tinted with the remnants of red paint. I noticed that one glyph block (at O2) in the right flange appears to be tinted with dark blue paint (see Figure 5 below).



*Figure 5. Note red paint in the lower right corner glyph (P1), and dark blue pigment in the glyph-block above and to the left (O2). Photo by the author.*

The painting of the glyphs many provide important clues for interpreting the text, perhaps emphasizing categories of phrases. Although little visible paint remains, photographing the monument with specialized equipment may bring out unsuspected data on the original coloring scheme.

## Conclusion

The two primary questions that I had in mind while visiting Tortuguero Monument 6 have been answered. First, there are no remnants of dots useful for clarifying the K'in portion of the Distance Number that generates Lord Jaguar's birthday. Contextual considerations, however, discussed above, emphasize either November 30 (1 Ik') or November 28 (12 Ajaw). The possibility of a DN greater than 10 (two bars) has been eliminated, leaving only a 5-day range. Of course, it is possible that his birthday could fall on any of the five possible days, November 28 to December 2, 612 AD. This 5-day range is still compellingly tight for the astronomical parallel noted by Grofe (2011; see also Jenkins 2011). The implication here, which any astronomer-Mesoamericanist should appreciate, is that Lord Jaguar was aware that on the "13<sup>th</sup> Bak'tun completion" (December 21, 2012) the sun will be positioned at the Crossroads of the Milky Way and the ecliptic, at the southern terminus of the dark rift in the Milky Way — analogous to the sun's position at the time of his birth. (This is the much misunderstood and misrepresented "[galactic alignment](#)".) The astronomy of the thirteen dates on Tortuguero Monument 6 underscores an astronomical strategy employed by Lord Jaguar in the construction of his rhetorical narrative (Jenkins 2010). Second, a close examination of the important P4 verb glyph, photographically documented with my trusty 35 mm Minolta camera, using 800 speed film, does invite a revised depiction of the glyph, with a consequent possible further clarification or revision of the epigraphic decipherment.



*Figure 6. Close-up of the C-shaped element and its hooked lines within the P4 glyph. See also Figures 3 and 4. Photo by the author. Unaltered, unsharpened image.*

## References

Arellano, Alfonso. 2006. *Tortuguero: Una historia rescatado*. Universidad Nacional Autónoma de México.

Grofe, Michael. 2007. *The Serpent Series: Precession in the Maya Dresden Codex*. Dissertation for the University of California at Davis.

—2011. “Measuring Deep Time: The Sidereal Year and the Tropical Year in Maya Inscriptions.” In *Ethnoastronomy and Archaeoastronomy: Proceedings from the Ninth Oxford International Symposium on Archaeoastronomy*. C. Ruggles, ed., pp. 214–230. Cambridge: Cambridge University Press.

— (In Press). “A New Interpretation of the Copan Baseline Alignment: The Three Hearthstones and the Orion Nebula.” In *Archaeoastronomy in the Americas*. R. Benfer and L. Adkins, eds. Gainesville: University Press of Florida.

Gronemeyer, Sven. 2004. *Tortuguero, Tabasco, Mexiko*. Geschichte einer klassischen Maya-Stadt, dargestellt an ihren Inschriften. Band 1: Textband und Studie Magisterarbeit. Rheinischen Friedrich-Wilhelms-Universität zu Bonn.

[http://wayeb.net/download/theses/gronemeyer\\_2004\\_1.pdf](http://wayeb.net/download/theses/gronemeyer_2004_1.pdf)

— 2006. “The Maya Site of Tortuguero: Its History and Inscriptions.” In *Acta Mesoamericana*, vol. 17. Markt Schwaben: Verlag Anton Saurwein.

Gronemeyer, Sven, and Barbara MacLeod. 2010. “What Could Happen in 2012: A Re-Analysis of the 13-Bak’tun Prophecy on Tortuguero Monument 6.” In *Wayeb Notes*, no. 34, August 2010. Publication of the European Association of Mayanists.

[http://www.wayeb.org/notes/wayeb\\_notes0034.pdf](http://www.wayeb.org/notes/wayeb_notes0034.pdf)

Houston, Stephen. 2008. “What Will Not Happen in 2012.”

<http://www.decipherment.wordpress.com/2008/12/20/what-will-not-happen-in-2012/>

Jenkins, John Major. 1998. *Maya Cosmogenesis 2012*. Santa Fe: Bear & Company.

— 2002. *Galactic Alignment*. Rochester, VT: Inner Traditions International.

— 2009. *The 2012 Story*. New York: Tarcher / Penguin Books.

— 2010. “Astronomy in the Tortuguero Inscriptions.” Presented in the *Archaeoastronomy in the Americas* section of the 75<sup>th</sup> Meeting of the *Society for American Archaeology*. St Louis, April 15.

— 2011 (compiler). *The Maya Exploration Center Facebook Discussion on the Astronomy of 2012 and Tortuguero Monument 6*.

[http://www.mayaexploration.org/pdf/MEC\\_Facebook\\_Discussion\\_2010\\_Jenkins.pdf](http://www.mayaexploration.org/pdf/MEC_Facebook_Discussion_2010_Jenkins.pdf)

Riese, Berthold. 1978. "La inscripción del Monumento 6 de Tortuguero." In *Estudios de Cultura Maya*. Mexico: Centro de Estudios Mayas, UNAM: XI, 187-198.

Stuart, David. 2005(2004). "New Year Records in Classic Maya Inscriptions." In *The PARI Journal* 5(2):1-6. Pre-Columbian Art Research Institute, San Francisco.  
<http://www.mesoweb.com/pari/publications/journal/502/NewYear.html>

— 2011. *The Order of Days: The Maya World and the Truth About 2012*. New York: Random House. Reviewed at: <http://Update2012.com/review-stuartsbook.html>.

### About the author

*John Major Jenkins* is an independent researcher dedicated to reconstructing precessional astronomy in Mesoamerican traditions, and elucidating the spiritual teachings that are integrated with that astronomy. Since the mid-1980s he has worked on volunteer service



projects with the contemporary Maya, has investigated and performed archaeo-astronomical field work at the pre-Classic site of Izapa and elsewhere, and recently has examined in person the "2012" inscription found on Tortuguero Monument 6. The author of more than a dozen books on Maya thought, culture, astronomy, and spiritual teachings, John's first treatment of 2012 is found in his 1989 book *Journey to the Mayan Underworld*. John is also a long-time critic of popular, media, and academic misrepresentations of 2012, most clearly and categorically detailed in his recent book *The 2012 Story* (Tarcher / Penguin

Books, 2009) and on the website [Update2012.com](http://Update2012.com). In his 1998 book, *Maya Cosmogenesis 2012*, he elaborated the evidence for his "2012 alignment theory" — a reconstruction of the original intentions behind the solstice placement of the 13-Bak'tun period ending in 2012. The astronomical scenario identified by John is now becoming more supported by recent scholarship, evidence for which was shared in John's *Society for American Archaeology* presentation ("Astronomy in the Tortuguero Inscriptions," 2010). Additional findings will appear in a forthcoming University Press of Florida anthology on archaeoastronomy in the Americas. Email: [John@Alignment2012.com](mailto:John@Alignment2012.com).

**Acknowledgments.** Thank you to Shannon Kring-Buset for making this trip happen. To Ed Barnhart and Jim Walsh for help with logistics and travel. To Christopher Powell for discussions and for visiting the museum with us. To Michael Grofe for feedback and his ongoing insights into the Tortuguero inscriptions and Maya astronomy.