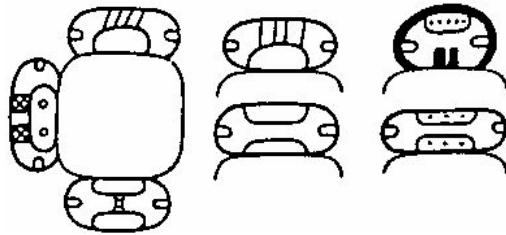


## A New Sign for CHAK

by Erik Boot (email: wukyabnal@hotmail.com)  
Rijswijk, the Netherlands. July 21, 2009

Several Late Classic Maya ceramic vessels provide the base for a substitution pattern of a rare sign and the well-known sign T109 **CHAK**.<sup>1</sup> In this short note I present two different environments or contexts in which the rare sign substitutes for T109 and thus also can be deciphered as **CHAK**.



**Figure 1** - T109 **CHAK** and its graphic variation as cataloged by Thompson (1962: 51)

The first environment or context concerns a common title sequence to be found within the nominal and titular section of dedicatory texts on Maya ceramics is *chak ch'ok kelem* (\**chak ch'ok kele'm*). It can be found represented in a variety of regional traditions and spelled in different ways (Figure 2).<sup>2</sup>



**Figure 1** - The title *chak ch'ok kelem* in various local traditions and spellings, a) Kerr No. 4387: **CHAK-ch'o-ko KELEM**, b) Kerr No. 6055: **CHAK-ch'o-ko KELEM-ma**, c) Kerr No. 6551: **CHAK-ch'o[ko] KELEM**, d) Kerr No. 6659: **CHAK-ch'o-ko ke-le**



**Figure 3** - Kerr No. 4976: **CHAK CH'OK**[ko] **KELEM** (rollout photograph by Justin Kerr; detail photographs digitally enhanced by the author using PhotoZoom Pro 2.1 software, employing Lanczos Resize Method)

A ceramic vessel (Figure 3a), in style unique in the presently available corpus of Late Classic Maya ceramics, provides a different spelling for the sequence *chak ch'ok kelem* (Figure 3b). The composite sign, a leaf-like element attached to a spiky head-shaped sign, prefixed to *ch'ok kelem* may serve to spell *chak*. This sign, here nicknamed LEAF.HEAD, thus also has the value **CHAK**. With all constituent parts being the same, this decipherment seems straightforward.

Also note that the dedicatory text on this vessel is repeated in three vertical columns, in which, after the vessel contents, again the LEAF.HEAD occurs. However, the title sequence in this text is incomplete (Figure 3c).



**Figure 4** - Early Classic vessel (after Hellmuth 1987: Figure 411)

Another ceramic vessel, of which at present I am only familiar with through a still photograph, again shows the LEAF.HEAD sign (Figure 4). After the vessel contents (*sakha'*, or perhaps *sakha'al*), the LEAF.HEAD sign precedes a spelling **CHAK-ch'o KELEM**. Seemingly, twice the value **CHAK** would be represented, while the word *ch'ok* is spelled in an incomplete format.

Albeit rare, “doubled spellings” do occur in dedicatory texts. For instance, one vessel employs the sequence **ji-chi ji-chi** employing different signs for **ji** and **chi** (Figure 5a), while two other vessels repeat the spelling **yu-k'i-bi** with a different sign for **bi** (Figure 5b-c).<sup>3</sup> One vessel repeats the spelling **ta-yu-ta-la** with no sign substitution (Figure 5d). Perhaps the possible spelling **CHAK CHAK-ch'o KELEM** is such a repeating spelling.



**Figure 5** - Repeated spellings on Classic Maya ceramics, a) Kerr No. 1348, b) Kerr No. 5454, c) Kerr No. 7190, d) Kerr No. 1810 (all photographs by Justin Kerr)

For the proposed decipherment of the LEAF.HEAD as **CHAK** to be correct, more evidence is necessary, preferably a different environment or context in which the signs substitute.

Two ceramic vessels painted in the style or tradition of the greater El Zotz' area (for association of this style with El Zotz', see Houston 2008b; Houston, et al. 2006) provide a clear substitution of the regular T109 **CHAK** sign and the new sign. A bowl and a large plate, both of unknown provenance, but referring to the El Zotz' paramount title K'uhul Pa'chan Ajaw (“Godly/God-like Pa'chan King”) in their respective dedicatory texts, provide the second case of substitution.

The dedicatory texts on these vessels contain substitutions common to the regional style of El Zotz' (e.g., T528.SKULL for **ba** and the composite SPLIT.SKY-**na** for **'u**).<sup>4</sup> The final part of both texts ends with a long nominal and/or titular phrase (Figure 6). As visually can be established, the two sequences provide the same name and/or titles. The final section is of importance here. On the bowl (Figure 6a) this section spells **CHAK-nu-GOURD/tzu**, while on the large plate (Figure 6b) this section provides LEAF.HEAD **nu JAGUAR**.



a



b

**Figure 6** - a) Kerr No. 5465 (rollout photograph by Justin Kerr; detail photograph digitally enhanced by the author using PhotoZoom Pro 2.1 software, employing Mitchell Resize Method), b) Plate in the collection of The Nasher Museum of Art at Duke University (inv. no. 47.78.2) (drawing by unknown artist, digitally arranged and cleaned by the author)

Although the final section of the titular and/or nominal phrase can not be deciphered in full (tentative decipherment: **K'IK' TI'-si CHAN-na ? YOPAT? CHAK nu-tzu? BALAM?**), the opening signs clearly substitute for each other. The regular T109 **CHAK** is again replaced by the sign depicting a leaf attached to a head-shaped sign. These two examples thus support the substitution in the *chak ch'ok kelem* title sequence and provide sufficient epigraphic evidence that the LEAF.HEAD sign is **CHAK** as well.

Two other ceramic vessels painted in the greater El Zotz' area style or tradition provide additional examples in support of the identification of the LEAF.HEAD sign as **CHAK**.

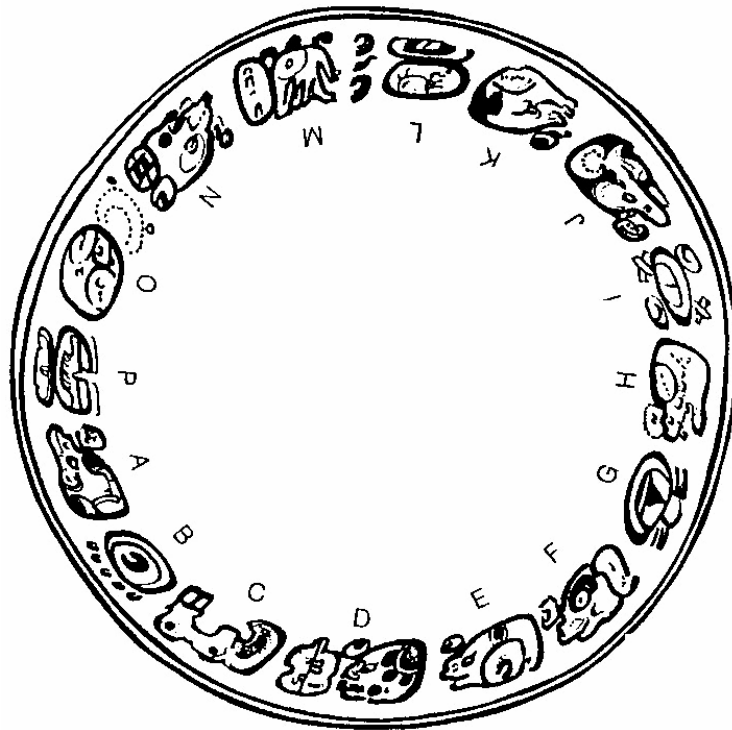
Kerr No. 6618 again provides a dedicatory text in the regional El Zotz' style. After the vessel type (*ujay yuk'ib* [\**ujaay yuk'ib*]) and the vessel contents (*ta tzihi[l] te'el [ka]kaw*) follows the titular expression Chak Ch'ok Kelem, spelled as LEAF.HEAD **ch'o-ko KELEM** (Figure 7a). In this context the LEAF.HEAD sign does seem to function as **CHAK**. Kerr No. 8393 provides a dedicatory text with a similar vessel type (*ujay yuk'ib*) and vessel contents (*ta tzihi[l] te'el [ka]kaw*; note the CENTIPEDE.JAW sign for **wa** in both texts). Then follows the royal title of El Zotz' (*k'uhul pa'chan ajaw*). After this paramount title one can find the same nominal phrase (Figure 7b) as contained in the texts illustrated in Figure 6.<sup>5</sup>



**Figure 7** - Additional examples, a) Kerr No. 6618, LEAF.HEAD **ch'o-ko KELEM** (rollout photograph by Justin Kerr; detail digitally enhanced by the author), b) Kerr No. 8393, nominal phrase of El Zotz' king employing regular **CHAK** sign (indicated by the arrow)

The final two collocation are of importance here. These two collocations can be transcribed **CHAK-ka-nu tzu-?**. This spelling contains a rare example of phonetic complementation of the T109 **CHAK** sign as **CHAK-ka**,<sup>6</sup> of which a second example can be found on one of the Naranjo bone needles (Kerr No. 8019, **CHAK-ka-TOK-ko WAY[bi]**, *chak tok wayab* [*\*chak tok wayaab*]). The final sign, below the GOURD **tzu** sign is undeciphered; most probably it spells the next part of the name (spelled as JAGUAR on the El Zotz' plate).

A last example of this complex nominal phrase may be found on a vessel illustrated first in Michael Coe's 1973 seminal work "The Maya Scribe and His World" (No. 38; Kerr No. 5509).



**Figure 8** - Lid of El Zotz' style ceramic vessel (drawing by Dianne Peck, after Coe 1973: No. 38)

The body of the vessel contains a dedicatory text, which states that the vessel was owned by a certain K'anjal Mukuy (\**k'anjal mukuuy*) who was a Jun Winakhab Ajaw (\**ju'n winakhaab ajaaw* "One K'atun King"). The vessel does have a lid, which is encircled with a painted text (Figure 8). How this text connects to the text on the body of the vessel remains to be resolved.

This text contains a titular and nominal phrase which opens with Kelem Ch'ok (at M-N, **ke-le-ma ch'o[ko]**), followed by K'uhul Pa'chan Ajaw (at O-P-A). A yet undeciphered sign, suffixed with **ji**, follows at B, after which the sequence at C-D probably spells the personal name. At C one can find an upright jawbone, conflated with a moon-like sign (note that there are no dots in the moon-like crescent), at D follows a GOURD sign, most probably for **tzu**, which is prefixed to an anthropomorphic head which resembles T1003c (Coe 1973: 86).<sup>7</sup> This head sign commonly has jaguar characteristics and is thus reminiscent of the large plate, where the nominal phrase ends with the sign of a jaguar head. The jawbone sign, although not inverted, may be another rare sign for **CHAK** (see Stuart 1987). If this phrase refers to the same nominal phrase as previously analyzed, the scribes who painted the texts thus employed all three variants for *chak*.

Two semantically different environments or contexts provide a good case that a sign here nicknamed LEAF.HEAD is a new sign for **CHAK**. The first context is titular; the new sign occurs in the common epithet Chak Ch'ok Kelem in which it substitutes for the common T109 **CHAK** sign.

The second context is, most probably, nominal; the new sign appears in the final part of a nominal phrase in which it substitutes for the regular T109 **CHAK** sign and it is prefixed to a sequence which in full may have read **CHAK nu tzu BALAM**.

## Notes

1) In transcription, lower case bold type letters refer to syllabic signs and upper case bold type letters refer to logographic signs. Signs presented without decipherment are referred to through short descriptive phrase, written in upper case normal type letters. Transliterations are put in italics and with no complex vowel reconstruction; reconstructions that do show the presence of complex vowels are put between brackets and are preceded by an asterisk and are only included once.

2) For a recent study of this title and its possible function in Late Classic Maya society, see Houston 2008a (paper presented at the 13th European Maya Conference, Paris, December 2008).

3) In a previous note (Boot 2005: 11), I proposed to transcribe the example on Kerr No. 7190 as **yu-bi-li yu-k'i-bi**. This identification is in error. More recent research by the author shows that existing **yu-bi** spellings are an abbreviation of **yu-k'i-bi** (see Boot 2009: 5-6).

4) Further research on the dedicatory texts of the greater El Zotz' area shows that the composite sign SPLIT.SKY-**na** substitutes for 'u (see Boot 2007; Houston 2008b). This identification shows that previous vessel type identifications (Boot 2005: 15-17) that include the SPLIT.SKY-**na** sign group are in error.

5) Interestingly, a rodent-like sign is written after [**K'IK'**]**TI'**, where Kerr No. 5465 which provides the sequence **K'IK' TI'-si**. While it is tempting to suggest that this rodent-like sign is a variant for **si**, it has to be noted that the phrase *chak ch'ok kelem* does not occur in this text and that the sign for **ch'o** (a rodent-like sign, as it depicts the head of a rat, *ch'oh*) may have painted here for some reason or another.

6) As noted by Houston (2008b), the INVERTED.JAWBONE variant for **CHAK** (Stuart 1987) can be found postfixed with **-ka** within the name of an Early Classic king of El Zotz'. The name is spelled with the regular T109 sign as **CHAK-ka-ANIMAL.HEAD** (Kerr No. 8458), **CHAK-ka-ANIMAL.HEAD 'a-ku** (Bagaces Mirror Back) and as [**CHAK**]**ka-ANIMAL.HEAD 'a-ku** (Kerr No. 0679). The same name is found spelled with the INVERTED.JAWBONE as **CHAK-ka-ANIMAL.HEAD** on El Zotz' Lintel 1 (formerly exhibited at the Denver Museum of Art; acquired by the museum in 1973, returned to Guatemala in 1998, see Rose 2001: 33). As Houston (2008b: 3) suggested, the ANIMAL.HEAD sign combines dog, fox(?), and feline features. A very similar nominal phrase, spelled **CHAK-ka-ANIMAL.HEAD**, occurs in the text on an unprovenanced panel in the Maegli Collection (Mayer 1984: Plate 54).

7) Already Coe (1973: 87) noted similarities in the texts of Kerr Nos. 5465 (Coe 1973: No. 39) and 5509 (Coe 1973: No. 38). He also writes that the two vessels may have been found together. The single photograph of the lid, as published by Coe in 1973, has not been helpful in the present analysis, which, unfortunately, is only based on the drawing. However, the present owners will be contacted in the hope that a good photograph can be obtained for further study.

## References

Boot, Erik

2005 *A Preliminary Overview of Common and Uncommon Classic Maya Vessel Type Collocations in the Primary Standard Sequence*. Mayavase.com.  
URL: <http://www.mayavase.com/VesselTypes.pdf>

2007 *Classic Maya Writing: One Syllabary, or Many?* Paper presented at *The Idea of Writing IV: "To and Fro The Syllabary"* symposium, June 2007, Leiden. In press.

2009 *The Bat Sign in Maya Hieroglyphic Writing: Some Notes and Suggestions, Based on Examples on Late Classic Ceramics*. Mayavase.com.  
URL: [http://www.mayavase.com/boot\\_bat.pdf](http://www.mayavase.com/boot_bat.pdf)

Coe, Michael D.

1973 *The Maya Scribe and His World*. New York: The Grolier Club.

Hellmuth, Nicholas

1987 *Monster und Menschen in der Maya-Kunst*. Graz, Austria: ADEVA.

Houston, Stephen D.

2008a *A Splendid Predicament: Glyphs, Archaeology, and Young Men among the Classic Maya*. Paper presented at the 13th European Maya Conference, Paris, December 5-6, 2008.

2008b *The Epigraphy of El Zotz'*. Mesoweb.com.

URL: <http://www.mesoweb.com/zotz/articles/ZotzEpigraphy.pdf>

Houston, Stephen D., et al.

2006 *Levantamiento preliminar y actividades de registro en El Zotz', Biotopo San Miguel La Palotada, Petén*. Informe entregado al Departamento de Monumentos Prehispánicos y Coloniales, Dirección General del Patrimonio Cultural y Natural de Guatemala.

URL: <http://www.mesoweb.com/zotz/resources/El-Zotz-2006.html>

Mayer, Karl-Herbert

1984 *Maya Monuments: Sculptures of Unknown Provenance in Middle America*. Berlin, Germany: Verlag Karl-Friedrich von Flemming.

Rose, Mark

2001 The Getty's mea culpa. In *The UNESCO Courier*, Vol. 54 (4): 32-34.

Stuart, David

1987 A New Variant of the *chak* Sign. *Research Reports on Ancient Maya Writing* 10. Washington, D.C.: Center for Maya Research.

### **File History**

First version: February 6, 2009

Revised: July 21-22, 2009

This version: July 22, 2009



## Postscript

The text on the decipherment of the new sign for **CHAK** was started in January 2009, and it specifically was based on the substitution in the *chak ch'ok kelem* context. Other contexts emerged and a first version was written in February 2009 and distributed among fellow epigraphers. An extended version was finished in July 2009 and, again, distributed among fellow epigraphers.

Recently “Unveiled Brightness: A History of Ancient Maya Color” was published by University of Texas Press, Austin. This study is written by Stephen Houston, Claudia Brittenham, Cassandra Mesick, Alexandre Tokovinine, and Christina Warinner. In this study the same substitution pattern of the different signs for **CHAK** is observed (pages 30-31), but without the illustration of examples that visualize this particular substitution pattern.

It is my hope that my essay and their study both provide the epigraphic evidence that the “leaf and spiky head” (i.e., LEAF.HEAD) sign is indeed an allograph for **CHAK**.

## Reference

Houston, Stephen, Claudia Brittenham, Cassandra Mesick, Alexandre Tokovinine, and Christina Warinner  
2009 *Unveiled Brightness: A History of Ancient Maya Color*. Austin: University of Texas Press.