

# Some Notes on Fireflies

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## Introduction

Animals are omnipresent in Maya art. Mammals, reptiles, birds and amphibians are most common, but several insects also appear. Many of these animals, besides being identified in the iconography, have also been identified by name in the corpus of inscriptions.

One of the most common insects depicted in Maya art, especially on ceramic bowls, is the firefly (see especially Coe 1973: 99, 1978: 34; Robicsek and Hales 1981: 40-41, vessels 19-21), yet its name in the inscriptions is correspondingly rare. In this short note I review the iconography of fireflies and, based on this information, propose that the main glyph in the name of an important deity at Tikal and Dos Pilas may be a logograph for 'firefly'.

## The Firefly in Mayan Languages

The words for firefly in lowland Mayan languages are fairly similar. Kaufman and Norman (1984: 123, item 239) provide the following entry in their Proto-Ch'olan vocabulary:

\**kuhkay* firefly

In Ch'olti (Moran 1935: 41) and Ch'orti' (Wisdom 1950: 443, 498), the two languages most closely related to Classic Mayan (Houston, Stuart & Robertson 2000), we find the following forms:

Ch'olti'	<cucai>	large firefly
Ch'orti'	<i>aj kuhkay</i>	firefly-like insect
Ch'orti'	<i>kuhkay</i>	lightning-bug, star

Other relevant entries, taken from Wichman and Brown (n.d.), include:

Tzeltal	<i>kukay</i>	luciérnaga, cocuyo
Tzotzil	<i>kukay</i>	luciérnaga
Kekchi	<i>kukaay</i>	cocuyo, luciérnaga
Mopan	<i>kukayte'</i>	luciérnaga grande, cocuyo
Mopan	<i>kukay</i>	escarabajo de resorte
Yucatec	<i>kóokay</i>	firefly; flashlight [metaph.]

The Yucatec form, *kóokay*, taken from Bastarrachea et al. (1992: 96), Bricker et al. (1998: 132) and Kaufman (2003: 672) deserves further comment. In fact, the high-tone observed in this form developed historically from an earlier preconsonantal *h*, suggesting the earlier form *\*kohkay* (Marc Zender, personal communication 2004). This agrees well with the proposed form *kuhkay*, which was very likely the Classic Mayan word for firefly.

### **The Firefly in Myth and Religion**

There are a number of interesting references to fireflies in Conquest-period documents and, most importantly, in the Popol Vuh itself. The reference in the Popol Vuh is particularly interesting as it associates fireflies with the practice of cigar smoking (as first noticed by Coe 1973: 99). This is quite in agreement with the available iconography for the insect, as I will show later on.

Fireflies appear in the Popol Vuh in the context of the Dark House, one of the tests imposed on the hero twins by the lords of Xibalba. Here is the relevant passage from Dennis Tedlock's (1996: 119) translation:

*And after that, the messenger of One Death brought their torch, burning when it arrived, along with one cigar apiece.*

*"Here is their torch," says the lord. "They must return the torch in the morning, along with the cigars. They must return them intact," say the lords," the messenger said when he arrived.*

*"Very well," they said, but they didn't burn the torch – instead, something that looked like fire was substituted. This was the tail of the macaw, which looked like a torch to the sentries. And as for the cigars, they just put fireflies at the tips of those cigars, which they kept lit all night.*

In fact, anyone who has seen a lit cigar on a dark night is easily impressed with its similarity to a flying, glowing, firefly.

Another possible mention of fireflies in Maya mythology appears in the name of a Late Postclassic deity referred to in Conquest-period documents. The name of this deity was *yax kokah mut*. This may be a corrupted form of *yax kokay mut*, literally (“first firefly bird”), as first suggested by Ralph Roys (cf. Freidel et al. 1993: 164, 439 n. 88). Also, in López de Cogolludo (cited in Thompson 1970: 204) we find the following:

*The Indians of Yucatan believe that there was an only live and true God ... and that he had a son whom they called Hun Itzamna or Yaxcocahmut.*

During the 16th century, in the Muluc years, a bird god named *Yax Kokah Mut* was apparently worshiped in public ceremonies. Later, in the late 17<sup>th</sup> century, a visitor to the capital of the Itza' Maya in lake Petén-Itza' wrote that a pedestal with a column representing the *yax cheel kab'* (first tree of the world) stood in the center of *Kan Ek's*

palace, and that its western side was sculptured with the image of one *ah kokah mut* (Jones 1998: 124). These might also refer to firefly deities, though it should be cautioned that Erik Boot (personal communication, 2003) reads this name *yax kok ah mut* (“first eagle”?) instead, since *kok mut* means “eagle” in Tzeltal.

Susan Milbrath (1999: 16-17) mentions that several metaphors for stars were used in Conquest-period Yucatan. Among these metaphors are jaguar- and deer-spots, flowers, eyes and, most interesting for our purposes, fireflies. Of fireflies we read:

*The "queen of stars" is a firefly (cocay), according to one colonial Yucatec source, and fireflies are said to carry "lights from the stars". "Firefly" is also a ritual term used to refer to a cigar or smoking tube in the Chilam Balam of Chumayel. As we have seen, comets are also compared to cigars.*

It is also noteworthy that, in modern Ch'orti' (Wisdom 1950: 498), *kuhkay* is a word for "star".

From these examples, it seems clear that references to fireflies not only appear in Maya mythology, but that some deities may well have been named after them. Fireflies are also common metaphors for stars and cigar smoking in the Maya area, a metaphor that may have its root in the Popol Vuh myth or an even earlier mythology (again, see Coe 1973: 99).

### **The Firefly in Maya Art**

The first identification of a firefly in the context of Maya art, more specifically ceramic vessels, was made by Michael Coe in his groundbreaking works: *The Maya Scribe and his World* (1973: 99) and the later *Lords of the Underworld* (1978: 34). Even at this early stage, and working almost exclusively with the imagery of the so-called 'Metropolitan Vase', Coe was able to identify the key diagnostic features of fireflies in Maya art. Later, Robicsek and Hales (1981: 40-41, vessels 19-21) applied Coe's arguments to the iconographic identification of fireflies on other vessels.

The best record of firefly images in Maya art is found on several codex-style vases depicting the 'sacrifice' of the Baby Jaguar. The vases K521, K1003 and K1815 (figures 1, 2, 3), incorporate fireflies that witness, and likely lit, these grim nocturnal scenes.

One of the secondary texts from K1815 (figure 4) may even provide a reference to the firefly (Erik Boot, personal communication 2003) in the associated scene. It reads:

**K'AHK'-TI' ku-ku-la** *k'ahk' ti' kuku'l*

The word *kuk* is used in some Mayan languages to refer to beetle-like insects, as shown by the following entries from the Cordemex (Bastarrachea et al. 1980: 346-7):

<i>kukul</i>	un insecto enemigo de la calabaza y otros sembrados
(ix) <i>kuklin</i>	escarabajo pelotero, escarabajo
(ix) <i>kukulim ta'</i>	escarabajo

In Tumbalá Ch'ol (Aulie and Aulie 1998: 20) we also find:

<i>cuc'lunta'</i>	cocuyo (insecto escarabajo negro que vuela por la noche, y que es relumbroso)
<i>cucuch yopom</i>	tipo de insecto verde (grasshopper or cricket?)

Two related forms can be found in the Odense Maya Dictionary (Dienhart 1997):

Ch'ol	<i>cuculunta</i>	bug, insect, horned beetle (Ethnospecies)
Mam	<i>cuc</i>	cockroach

And, finally, two relevant terms from Ch'orti' (Wisdom 1950: 497) are:

<i>kukech</i>	cucaracha
<i>kukechte'</i>	cucaracho (wild, Highland shrub)

These words may be related to the root *kuk*, “to turn, to roll over” (c.f., Chontal, Ch'orti', Yucatec, Itza'). Indeed, the firefly depicted in K1815 seems to be doing just this, rolling over in its flight (Albert Davletshin, personal communication 2003).

Thus, the name of the creature given on K1815 may have been intended as “fire mouthed beetle-like insect”. Or, given the overwhelming number of examples of fireflies smoking cigars in these scenes: “smoking beetle-like insect”. This looks like a straightforward reference to the firefly in the scene, and matches the available iconography for these insects beautifully.

As first outlined by Coe (1973: 99), the iconographic characteristics of the firefly are clear: a somewhat atypical skull (with an elongated 'beak'), an **AK'AB'** sign in the forehead, disembodied eyes attached to the skull, long wings with **AK'AB'** markings, a bulbous appendix in the firefly's abdomen, and a cigar held in the hand or in the mouth. This last feature clearly invokes the insect's ability to produce light.

Two other vases, K2226 and K8007 (figures 5 and 6), illustrate fireflies with cigars in their mouths rather than in their hands. A particularly lovely example of a flying firefly smoking a cigar can be found on the magnificent codex-style vase K8608 (figure 7), where it seems to be part of a somewhat atypical scene involving the 'sacrifice' of the Baby Jaguar.

Another interesting occurrence of a firefly appears on Piedras Negras Stela 5 (figure 8), where an enthroned king is surrounded by supernaturals and animals, one of which is likely a firefly. As in the examples from the ceramic vessels, the firefly seems to provide the ambient light for the scene, which takes place in a cave, as shown by the **WITZ** monster which frames the enthroned king and his *sajal* (Marc Zender,

personal communication 2004). This is one of the few appearances of an insect on a sculptured monument.

Another creature bearing all the diagnostic features of firelies may be seen on K793 (figure 9). On this vase, at least one of the depicted *way* creatures is likely in the guise of a firefly. Note the skull without eyes, the **AK'AB'** sign, the disembodied eyes, and the cigar/smoke in the mouth. The text associated with this figure provides further information. It can be transliterated and transcribed as follows:

**mi-hi-na che-ke-na AKAN ? ya-la-ji-ya ?-EK' ?-yi?**  
*mihiiñ cheke'n Akan ? y-alajiiy ?-ek' ?*

The text is difficult to translate, but seems to be a quotation of the words spoken (*y-alajiiy*) by the *way* creature itself. The name of this creature probably appears last, where it is written with a head variant accompanied by a star glyph (**EK'**) and a rare, undeciphered glyph that occasionally appears iconographically in the earflares of this creature. Again, fireflies seem to be related to stars in the name of this *way* creature.

Further occurrences of fireflies appear in vases with mythological scenes. Good examples can be found on K1386 (figure 10) and K1490 (figure 11). Another example appears on an unpublished Codex-style vessel sherd recently excavated at Nakbé (Stanley Guenter, personal communication 2003).

It is noteworthy that in some of aforementioned examples, the fireflies are represented with a major bulbous appendix in the abdomen. This corresponds exactly to the light-emitting organs of real fireflies. One wonders if these diverse treatments of the firefly's light-emitting qualities combined the characteristic cigar-cinder look of a firefly (as observed from a distance) with the scientifically more precise observation of their fluorescent abdomens (as observed close-up) (Marc Zender, personal communication 2004)?

### **Fireflies in the Script ?**

At Tikal and Dos Pilas, we find references to a deity that seems to have been particularly important to the dynasty of these cities, and one that may therefore have originated in the early history of Tikal (Houston 1993: 101).

The first known occurrence of this deity is on Tikal Stela 5, west, at B10 (figure 12). The collocation is composed of a main sign which has the attributes of a firefly head, smoking a cigar, as may be observed by comparing it with the images above. Notice the **AK'AB'** sign, the unusual shape of the skull, a small disembodied eye just above the ear and, most importantly, the smoke or flames issuing from the mouth. It is noteworthy that this logograph is distinct from the **AKAN** logograph, for the Maya god of wine and tobacco. The latter never occurs with a cigar or smoke coming out of its mouth. In addition, its skeletal form is clearly human-like, and therefore quite distinct from the unusual, prognathous form observed in these examples. The main sign is topped by a "Square Nosed Beast" and finally succeeded by an **EK'** ("star")

glyph. I suggest that the name may be transliterated as 'Square Nosed Beast'-**KUHKAY-EK'**.

At Dos Pilas, what may be the same name appears twice on the recently-discovered Panel 18, at A3 and H1 (figures 13 and 14). The context is again mythic, with this deity apparently witnessing the beginning of the current creation on 4 Ahau 8 Cumku. These examples are particularly revealing: notice the **AK'AB'** sign, the abnormal skull shape, the disembodied eye attached to the forehead and, most importantly, the smoke coming from the mouth. Again, the name may read, with a glyph arrangement slightly distinct from Tikal, 'Square Nosed Beast'-**KUHKAY-EK'**.

According to Houston (1993: 101, fig. 4-5b) a somewhat similar character may appear at Tamarindito (figure 15), where it is the founder of the local dynasty. There, the skull is apparently replaced by a macaw head. The Dos Pilas example (at H1) may also have a **MO'** below the "Square Nosed Beast", but it is hard to tell if this is a real feature or an artifact of preservation. There may be a connection between these deities as Houston points out, but it would be interesting to check that detail at H1 in Dos Pilas Panel 18 (figure 14), to ascertain whether it is truly a **MO'** prefix or simply a flame volute. Assuming Houston's reading is correct, however, the deity at Tamarindito may have been known as 'Square Nosed Beast'-**MO'-EK'**.

## **Conclusions**

In this short note, I have extended Coe's (1973: 99) earlier iconographic identification of fireflies with evidence indicating their association with the underworld, with both Classic and Postclassic deities, and with several important Maya myths. In particular, fireflies seem to be equated with stars in some of these myths.

Iconographically, the identification of fireflies in Maya art is greatly simplified by the existence of several clear diagnostic features. Although we are lacking adequate phonetic confirmation, these iconographic details apparently recur in an important deity name from Tikal and Dos Pilas, suggesting that at least this Classic Maya god was named after the firefly.

It is noteworthy that the name of this deity may have read something like "firefly star". Fireflies and stars are very intimately connected in Maya mythology, as has been shown. Moreover, "smoke star" is a term for comets and meteor(ite)s in a number of Mayan languages. It is thus possible that this deity is an aspect of a celestial body that appeared early in the history of Tikal, and may then have been incorporated into the myths of its people.

## **Acknowledgements**

I would like to thank Marc Zender, Erik Boot, Albert Davletshin, Dmitri Beliaev, Soeren Wichman and Joel Skidmore for their comments and observations on this note. Naturally, any mistakes or misapprehensions are my own. I would also like to thank Stephen Houston and John Montgomery for kindly allowing me to reproduce

their drawings, and Justin Kerr for generously providing his Maya Vase Database, without which this work would not have been possible.

## References

- Aulie, H. Wilbur, Evelyn W. de Aulie and Emily F. Scharfe de Stairs  
1998 *Diccionario Ch'ol de Tumbalá, Chiapas, con variaciones dialectales de Tila y Sabanilla*. Serie de vocabularios y diccionarios indígenas 'Mariano Silva y Aceves' No. 121. Instituto Lingüístico de Verano, México, D.F.
- Barrera Vásquez, A., J. Ramón Bastarrachea, W. Brito Sansores, R. Vermont Salas, D. Dzul Góngora and D. Dzul Poot  
1980 *Diccionario Maya Cordemex*. Mérida, México: Ediciones Cordemex.
- Bastarrachea, Juan R., Ermilo Yah Pech and Fidencio Briceño Chel  
1992 *Diccionario Basico Español-Maya*. Maldonado Editores, México.
- Bricker, V. R., E. Po'ot Yah, and O. Dzul de Poot  
1998 *A Dictionary of the Maya Language as Spoken in Hocabá, Yucatán*. University of Utah Press, Salt Lake City.
- Coe, Michael D.  
1973 *The Maya Scribe and His World*. Grolier Club, New York.  
1978 *Lords of the Underworld: Masterpieces of Classic Maya Ceramics*. Princeton University Press.
- Dienhart, John  
1997 *The Mayan Languages: A Comparative Vocabulary*. Electronic version, Odense University. <<http://maya.hum.sdu.dk>>
- Freidel, David, Linda Schele and Joy Parker  
1993 *Maya Cosmos – Three Thousand Years on the Shaman's Path*. Quill, William and Morrow, New York.
- Houston, Stephen D.  
1993 *Hieroglyphs and History at Dos Pilas : Dynastic Politics of the Classic Maya*. University of Texas Press, Austin.
- Houston, S., D. Stuart and J. Robertson  
2000 The Language of Classic Maya Inscriptions. *Current Anthropology* 41(3): 321-56.
- Jones, Grant D.  
1998 *The Conquest of the Last Maya Kingdom*. Stanford University Press, California.

Jones, Christopher and Linton Satterthwaite Jr.  
1982 *The Monuments and Inscriptions of Tikal: The Carved Monuments*. Tikal Report No. 33a. University of Pennsylvania Museum Monographs, Philadelphia.

Kaufman, Terrence  
2003 *A Preliminary Mayan Etymological Dictionary*, October 5, 2003.  
<<http://www.famsi.org/reports>>

Kaufman, Terrence and William Norman  
(1984) An Outline of Proto-Cholan Phonology, Morphology, and Vocabulary. In J.S. Justeson and L. Campbell, eds., *Phoneticism in Mayan Hieroglyphic Writing*, pp. 77-166. Institute for Mesoamerican Studies, Pub. No. 9. State University of New York, Albany.

Milbrath, Susan  
1999 *Star Gods of the Maya*. University of Texas Press, Austin.

Moran, Francisco  
1935 Vocabulario en Lengua Cholti. In W. Gates, ed., *Arte y Diccionario en Lengua Cholti: a manuscript copied from the Libro Grande of fr. Pedro Moran of about 1625*. Facsimile. The Maya Society, Publication No. 9. Baltimore.

Robicsek, Francis and Donald M. Hales  
1981 *The Maya Book of the Dead: The Ceramic Codex*. University of Oklahoma Press, Norman.

Tedlock, Dennis  
1996 *Popol Vuh: The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings*. Simon & Schuster, New York.

Thompson, J. Eric S.  
1970 *Maya History and Religion*. University of Oklahoma Press, Norman.

Wichman, Søren and Cecil Brown  
n.d. Mayan Etymological Dictionary Files. Computerized Manuscript in possession of the author.

Wisdom, Charles  
1950 *Materials on the Chorti Languages*. Microfilm Collection of Manuscripts on Middle American Cultural Anthropology, No. 28. Chicago. Transliterated and computerized by Brian Stross.

## Figures



Figure 1. Detail of K521 (© J. Kerr, used with permission)



Figure 2. Detail of K1003 (© J. Kerr, used with permission)



Figure 3. Detail of K1815 (© J. Kerr, used with permission)



*Figure 4. Detail of caption in K1815 (© J. Kerr, used with permission)*



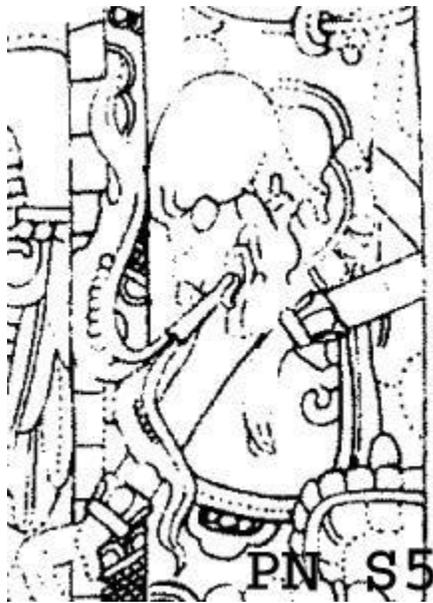
*Figure 5. Detail of K2226 (© J. Kerr, used with permission)*



Figure 6. Detail of K8007 (© J. Kerr, used with permission)



Figure 7. Detail of K8608 (© J. Kerr, used with permission)



*Figure 8. Piedras Negras, stela 5, front (detail). (Drawing by J. Montgomery, used with permission).*



*Figure 9. Detail of K793 (© J. Kerr, used with permission)*



*Figure 10. Detail of K1386 (© J. Kerr, used with permission)*

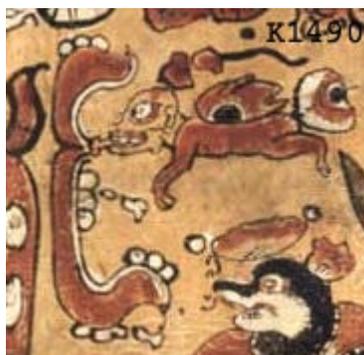


Figure 11. Detail of K1490 (© J. Kerr, used with permission)



Figure 12. Tikal, Stela 5, B10 (drawing by W. Coe, after Jones and Satterthwaite 1982).

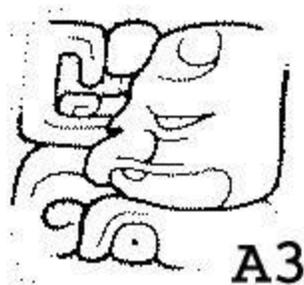


Figure 13. Dos Pilas, Panel 18, A3 (Drawing by S. Houston, after Houston 1993: fig.4-4. Used with permission.)

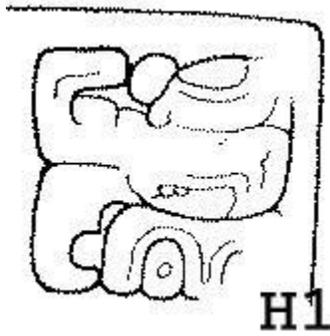


Figure 14. *Dos Pilas, Panel 18, H1* (Drawing by S. Houston, after Houston 1993: fig.4-4. Used with permission.)

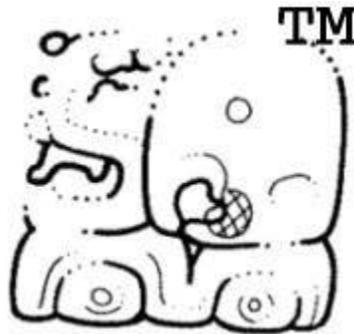


Figure 15. *Tamarindito, Hieroglyphic Stairway* (Drawing by S. Houston, after Houston 1993: fig.4-5b. Used with permission.)