

## A Preliminary Overview of Common and Uncommon Classic Maya Vessel Type Collocations in the Primary Standard Sequence

by Erik Boot (e-mail: [wukyabnal@hotmail.com](mailto:wukyabnal@hotmail.com))

March 7, 2005. Rijswijk, the Netherlands

In 1983-84 a database was started in which I entered the individual collocations of all then available Primary Standard Sequences (henceforth abbreviated to PSS; cf. Coe 1973 for the identification and first study on the PSS) on Classic Maya ceramics. At present this database contains over 575 PSS texts and it is continuously growing (note 1).

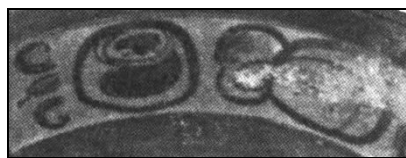
In the present essay a preliminary overview is presented of the different vessel type collocations that can be found in PSS texts from the Classic period. Each of the vessel types will be illustrated by one or more examples; additional examples may be presented to explain certain spelling details or graphic variations (note 2). The vessel type collocations will be presented in alphabetical order of the reconstructed item for the vessel type (note 3). Readers who are interested in the history of the decipherment of vessel type collocations are referred to the following essays: Boot (1997, 2003c), Grube (1990), Houston, Stuart, and Taube (1989), Houston and Taube (1987), Lacadena (1997), MacLeod (1990: Part 4), Reents-Budet (1994: Chapters 3 & 4), Stuart (1989), and Zender (2000).

The PSS is a dedicatory hieroglyphic text that contains an introductory part on the dedication of the vessel (e.g. *a-lay k'al-aj* "here, this one was presented[?]", a part that refers to either the writing (*u-tz'ib'*, *u-tz'ib'-al*) or incising/carving (*y-uxul(?)*, *y-uxul(?) -il*) of the vessel, the actual vessel type, a part on the contents of the vessel (e.g. *ta iximte'-el kakaw* "for Maize Tree derived cacao", *ta ul* "for maize gruel", *ta yutal kakaw* "for food[?] of cacao"), and often a closing part containing name and title(s) of the owner or patron of the vessel (e.g. *chak ch'ok* "great prince", *kelem* "young one, strong one"). PSS related texts also occur in monumental inscriptions; in those cases the text is restricted to the introductory part, carving, and building type, and its owner or patron (e.g. Yaxchilán, Lintel 25, O2-Q1: CR date GOD.N-Vy *y-uxul(?) -il y-otot* "(date) made proper[?] is the carving of the home of" Lady K'ab'al Xok).

Here follow twenty-six different vessel type expressions:

---

Vessel Type No. 1: *ajal(a)jib'*



Source: RMAH Brussels Plate (Anonymous 1976: Cat. No. 100) &  
Pomoná Plate (Schmidt et al. 1998: Cat. No. 447)

Style: Western Petén

Transcription: **ya-ja ji-b'i & ya-ja-la ji[b'i]**  
Transliteration: *yajal(a)jib'*

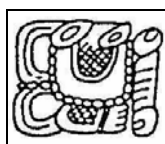
Two plates, both in public collections (Royal Museums of Art and History, Brussels, Belgium & El Museo del Sitio de Pomoná, Pomoná, Mexico; photograph courtesy Joel Skidmore), contain a vessel type expression that can be transcribed **ya-ja ji-b'i**. The text on both plates refers to a lord of the Man or Naman polity or site (spelled either **MAN-ni** or **na-MAN-ni**), which David Stuart and Stephen Houston among others tentatively have identified as La Florida (Lopes 2003: 1, 18). La Florida is located some 125 km. due west of Tikal.

The transliteration *yajal(a)jib'* offered here is based on an additional third example that can be found on a plate cataloged as MT 216b from Burial 195 at Tikal (drawing by the author, after Culbert 1993: Figure 51):



MT 216b (the underlying text to MT 216a) opens with two collocations that spell **ya-ja-la ji[b'i]**. I take this spelling to be related to the spellings **ya-ja ji-b'i** presented above, in which the Tikal example adds the syllabic sign **-la-**, while the last syllabic sign **-b'i** is infixed as the earflare of the syllabic sign **ji** (compare to Boot 2003a, 2004a). A fourth, partially surviving, example can be found on a ceramic sherd excavated at Piedras Negras. If correctly identified, all four vessel type expressions can be transliterated as *yaja(la)jib'*. In this expression *y-* would provide the third person possessive pronoun, while *-(a)j-ib'* is a rare bisyllabic suffix that is used to derive an instrumental noun. In this transliteration *-ajal* would be the gerund of the intransitive verb root *aj-* “wake up, awaken” (cf. Boot 2004a). If correct, the vessel type expression *yajal(a)jib'* or *y-ajal-(a)j-ib'* can be paraphrased “(it is) the awaken or wake up-instrument (...)”.

Vessel Type No. 2: *ak'tu'*



Source: Helmke n.d (Figure 12)

Style: Cave Branch Area, Belize

Transcription: **ya-k'u-tu-'u**

Transliteration: *yak'tu'*

At present there are two examples known of this expression, both to be found on Cave Branch Area ceramics (Helmke n.d: Figure 12). This collocation can be transcribed **ya-k'u-tu-'u** and transliterated as *yak'tu'*. The root of this expression is *ak'tu'*, of which *ak'-* may be related to the transitive verb *a(h)k'*- “to give”. The suffix *-tu'* might be a rare reflexive or instrumental suffix; this item may, for instance, be found in the “Emblem Glyph” of Caracol, *k'uhul k'antu' mak*. The Classic Maya suffix *-tu'* might be related to a suffix *-chu'* as found at Ek' Balam in Northern Yucatán in the phrase *u-k'an-chu'* (**'u-K'AN-chu**), the proper name of an object (the *k'anchu'* object name may explain the *k'antu'* name of the Caracol polity; *k'antu'* may be the

local Classic variant of the Northern Maya *k'anchu'*). The gloss *yak'tu'* or *y-ak'-tu'* may mean “(it is) the give-thing (...)”.

---

Vessel Type No. 3: *b'ub'*



Source: Seler 1894 (Tafel XIII)

Style: Chamá

Transcription: **'u-b'u-b'a**

Transliteration: *ub'ub'*

Within the present corpus of over 575 PSS texts there is only one example that spells **'u-b'u-b'a**, which may be transliterated as *ub'ub'*. In colonial Yucatec Maya *b'ub'* means “cylinder; column” and *b'ub'ul* “cylindrical, columnar” (cf. Reents-Budet 1994: 194).

This PSS containing the gloss *ub'ub'* seems to indicate that certain straight walled vessels (as this vessel) were considered to be a *b'ub'* “cylinder, column”. The vessel type expression *ub'ub'* or *u-b'ub'* can thus be paraphrased as “(it is) the cylinder (for ...)”.

---

Vessel Type No. 4: *ch'ajil*



Source: European Private Collection

Region: Motagua Valley (?)

Transcription: **'u ch'a-ji-lu**

Transliteration: *uch'ajil*

It was Nikolai Grube (1993) who first identified the spelling **'u ch'a-ji-lu** as the opening collocations in the PSS text contained on a small discoid-shaped ceramic pigment flask (commonly, but erroneously, referred to as “poison bottle”) (drawing by Nikolai Grube, electronically cleaned by the author; photograph by private collector, put at the disposal of the present author). At present I am familiar with about 20 such flasks marked *uch'ajil*, most of them in private collections in Europe and the United States.

The root of the gloss *uch'ajil* seems to be *ch'aj*, an item that refers to “a drop/droplet of any liquid” (cf. Love 1987). The item *ch'aj* is generally spelled **ch'a-ji**, although a rare example in Campeche provides a spelling **ch'a-je** (Xcombec, Monument 1, Side A) (also note late Classic vowel harmonic spellings **ch'a-ja** and **ch'a-ha**). In the present case, the suffix *-il* may be a kind

of nominalizing suffix to indicate “drop/droplet-container”. The gloss *uch’ajil* or *u-ch’aj-il* may mean something like “(it is) the droplet (-container) (...)”.

---

Vessel Type No. 5: *jay*



Source: Kerr Nos. 0954 & 4547

Style: Chocholá

Transcription: **’u-ja-yi**

Transliteration: *ujay*

For several years the gloss **ja-yi** (at that time transcribed «**ha-yi**») was thought to refer to «*hay*» “thin, thin walled” or to be related to Tzotzil *hayil*, *hayal* “basin” (cf. Grube 1989; MacLeod 1990: Part 4; Reents-Budet 1994: 127). This gloss would thus refer to “thin walled” ceramics. It was Alfonso Lacadena (1997) who suggested that the root *jay* (he employed the transliteration «*ja:y*») might be related to Mopán Maya *jaay* “clay bowl”. The gloss *ujay* or *u-jay* may thus mean “(it is) the clay bowl (...)”.

A rare example of this particular vessel type can be found spelled as **’u-ja-ya**:



Also in this example (Kerr No. 5838) the gloss *ujay* or *u-jay* may mean “(it is) the clay bowl (...)”.

---

Vessel Type No. 6: *jay chu’b’al cheb’*



Source: Kerr No. 4022

Style: Chocholá

Transcription: **’u-ja-yi ’u-chu[b’a]-la che-b’u**

Transliteration: *ujay uchu’b’al cheb’*

This unique spelling covers three collocations. It opens with **’u-ja-yi** for *ujay* “(it is) the clay bowl (...)”, but it is followed here by **’u-chu[b’a]-la** for *uchu’b’al*. This particular expression

seems to have *chu'* as its root, an item that refers to a specific kind of gourd in several Mayan languages. It should be noted that in colonial Yucatec Maya *chu'* and *chuh* are also defined as “bowl, flask for wine or water or other liquid”. The *-b'a'* suffix seems to be a reflexive suffix and in colonial Yucatec Maya it can be found in composite nouns as *winb'a'* and *k'ohb'a'*. The spelling **-b'a-la** for *-b'al* may be a contraction of *-b'a'-il*, in which *-b'a'* can be identified as the reflexive suffix and *-il* as a possessive suffix. The third collocation can be transcribed **che-b'u** for *cheb'* (note spelling **che-'e-b'u** in Example No. 14); in colonial Yucatec Maya *cheb'* and *cheeb'* mean “quill, pen to write with” (cf. Boot 1997, 2003b). The complete gloss *ujay uchu'b'al cheb'* or *u-jay u-chu'b'a'-il cheb'* may mean either “(it is) the clay bowl, the gourd-thing (of the) quill (...)” or “(it is) the clay bowl, the bowl-thing (of the) quill (...)”. This unique vessel type may thus include a pair of vessel type collocations (*ujay uchu'b'al*) which identifies this retainer of the *cheb'* “quill”, the instrument with which master scribes painted their ceramics. The item *jay* may refer to the fact that this indeed was a “clay bowl” representation of an object which originally was made of some kind of calabash or *chu'*. Different kinds of gourd containers are still used today by Maya farmers and ritual specialists.

---

Vessel Type No. 7: *jay uk'ib'*



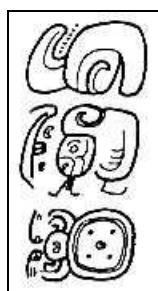
Source: Kerr Nos. 3459, 4542 & 6055

Style: Uaxactún & Chocholá

Transcription:       **'u ja-yi yu-T77.WING-b'i**  
 Transliteration:     *ujay(il) yuk'ib'*

Several Classic Maya ceramics record the paired expression *ujay yuk'ib'*. The item *uk'-* is an intransitive verb root with the meaning “to drink”; *-ib'* is a common instrumental suffix to be found on intransitive verb roots. The root of *yuk'ib'* is *uk'ib'* which can be interpreted as “drink-instrument”. The paired expression *ujay yuk'ib'* or *u-jay y-uk'-ib'* means “(it is) the clay bowl, the drink-instrument (...)”. There are examples in which, due to space limitations or poor layout, the vessel type is abbreviated to **'u-ja-yi yu-T77.WING** (e.g. Kerr No. 3924).

A ceramic vessel found at Uaxactún contains a short PSS text (Grube 1990: Figure 3c) which provides an alternative for the expression *ujay yuk'ib'*: The text can be transcribed as **ja-yi 'u-K'AB'A' T77.WING-yu-b'i** for *jay uk'ab'a' yuk'ib'* (the T1016 **K'UH** sign infixed into the **K'AB'A'** logograph is currently interpreted as part of the logograph and is not read separately to modify the noun *k'ab'a'*; Nikolai Grube, personal communication, March 2003):



The expression *jay uk'ab'a' yuk'ib'* or *jay u-k'ab'a' y-uk'-ib'* can be translated as “clay bowl is the name of the drink-instrument”. A variant spelling of the paired expression *ujay yuk'ib'* can be found in a late Classic PSS:



This spelling (Kerr No. 4997) can be transcribed **'u-ja-ya yu-T77.WING-b'i** for *ujay yuk'ib'* (compare to Example No. 5). The gloss *ujay yuk'ib'* or *u-jay y-uk'-ib'* would also mean “(it is) the clay bowl, the drink-instrument (...)”.

Vessel Type No. 8: *jawa(n)te'*



Source: Kerr Nos. 3636 & 4669

Style: Codex

Transcription: **'u-ja-wa-TE'**, **'u ja-wa-TE'**

Transliteration: *ujawa(n)te'*

There are at least six plates that contain a PSS text in which the sequence **'u-ja-wa-TE'** (or its fully abbreviated shape **'u-ja-TE'**) refers to the vessel type. It specifically seems to refer to wide tripod plates (cf. MacLeod 1990; Reents-Budet 1994).

It was Stephen Houston who in 1989 connected the **'u-ja-wa-TE'** spelling to an entry in colonial Yucatec Maya *hawante'* meaning “container with a wide mouth and shallow depth”. The colonial Yucatec Maya gloss *haw lak* can be added here to establish the meaning of the Classic Maya expression *ujawa(n)te'*, as *haw lak* is defined as “container with wide mouth and little depth”. The phoneme /n/ is often abbreviated or underspelled in composite nouns (note Classic Maya spellings **sa-ku wi-WINIK-ki** for *saku(n)winik* and **'i-tz'i wi-WINIK** for *itz'i(n)winik*). The terminal suffix *-te'* “tree, wood” may indicate that originally this kind of plate was not made of ceramic material but of wood. The gloss *ujawa(n)te'* or *u-jawa(n)te'* would mean “(it is) the wide-mouthed container (made of wood) (...)”.

Vessel Type No. 9: *lak*



Source: Kerr Nos. 1260, 1892 & 5072

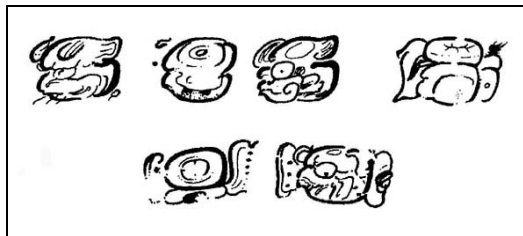
Style: Tikal & Codex

Transcription: **'u-la-ka**

Transliteration: *ulak*

In 1987 this was the first vessel type collocation that could be transcribed and transliterated with certainty, as it was spelled with well-established syllabic signs **'u-la-ka** for *ulak* (cf. Houston and Taube 1987). The root of this expression is *lak*, which in colonial Yucatec Maya means “clay object” but also “plate”. Also note the colonial Yucatec Maya gloss *haw lak*, mentioned in the discussion of the previous example. The gloss *ulak* or *u-lak* may mean “(it is) the plate (...)”.

Vessel Type No. 10: *lak otot k'in chan*



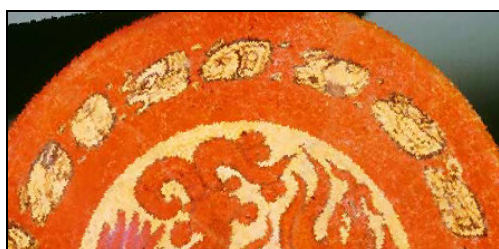
Source: Dumbarton Oaks Slide Archive (dr. 13-LC-p2-162) (Houston 1998: Figure 13d)

Style: Codex

Transcription: **'u la ka yo-'OTOT-ti 'u-K'IN-ni-li 'u-SERPENT-li**  
 Transliteration: *ulak yotot uk'inil uchanil*

This (at present) unique example provides a complex metaphorical expression to refer to a ceramic plate (unfortunately I am only familiar with this part of the text). The plate is referred to as *ulak*, as in Example No. 9 above, but additionally as *yotot uk'inil uchanil*. This additional vessel type expression contains *otot* “house (in the sense of home)”, *k'in* “sun”, and *chan* “sky”. This text was first discussed by Houston (1998: 349) and, in part following his suggested translation, *ulak yotot uk'inil uchanil* or *u-lak y-otot u-k'in-il u-chan-il* can be paraphrased as “(it is) the plate, the home (of) the sun, (of) the sky (...)” (see Examples No. 13 & 14).

Vessel Type No. 11: *lak we'ib'*



Source: Kerr No. 5460

Style: Uaxactún

Transcription: **'u la ka 'u EAT 'i b'i**  
 Transliteration: *ulak uwe'ib'*

The gloss *ulak* is paired with another expression in this vessel type collocation. The whole sequence of signs reads **'u la ka 'u EAT 'i b'i** for *ulak uwe'ib'*. The root of the gloss *uwe'ib'* is *we'*, an intransitive verb with the meaning “to eat”. The suffix *-ib'* derives an instrumental noun

from an intransitive verb root, as such *we'ib'* means “eat-instrument”. The paired expression *ulak uwe'ib'* or *u-lak u-we'-ib'* means “(it is) the plate, the eat-instrument (for ...)” and seems to indicate that certain plates were used to consume specific food stuffs (at present there are only two examples, Kerr No. 5460 [Duke University Museum of Art] & 6080 [Gardiner Museum of Ceramic Art], cf. Zender 2000).

Vessel Type No. 12: *otot*



Source: Robiscek and Hales 1981 (Table 20B) & Kerr No. 8009

Style: Codex & Tikal

Transcription: **yo-to-ti, yo-HOUSE**

Transliteration: *yotot*

Some ceramic containers obtained quite a different proper name. The small pigment flask depicted above on the left is painted with the collocation **yo-to-ti** for *yotot* (compare to Example No. 11). The Tikal example of *yotot* illustrated above on the right follows after the introductory section of a short PSS text (*alay* GOD.N-Vy *yotot* (...)) “here, this one [...] *y-otot* ...”) and provides the vessel type expression as *yotot*. The root of this expression is *otot*, the Classic Maya gloss for “house” but in the sense of “home”. Apparently these containers obtained a different function and meaning (cf. Houston 1998). Some ceramic containers even obtained houselike details as roof lids and rims or even a full houselike form (Houston 1998: 349, Figure 14). The vessel type expression *yotot* or *y-otot* would mean “(it is) the home (...)”.

Vessel Type No. 13: *otot k'in*



Source: Dumbarton Oaks Slide Archive (dr. 14-LC-p2-213) (Houston 1998: Figure 13e)

Style: Codex

Transcription: **'yo-HOUSE 'u K'IN-ni-li**

Transliteration: *yotot uk'inil*



This (at present) unique metaphorical expression may be an abbreviation of Example No. 10, as it also was found on a plate (Houston 1998: 349) (only this part of the text is currently available). Following the expression in Example No. 10, the present vessel type *yotot uk'inil* or *y-otot u-k'in-il* may mean “(it is) the home (of) the sun (...)”.

---

Vessel Type No. 14: *pokol che'eb'*



Source: Kerr No. 7786

Style: Codex

Transcription:        **'u-po-ko-lo che-'e-b'u**  
Transliteration:       *upokol che'eb'*

This unique expression *upokol che'eb'* is the second vessel type that contains the noun *che'eb'* “quill” (note the spelling **che-'e-b'u**, compare to **che-b'u** spelling in Example No. 6). The part *upokol* contains the root *pok*, which in several Mayan languages means something like “to wash, to clean”. Also note that in colonial Yucatec Maya *pok* and *pokil* are defined as “soot, ink”. The suffix *-ol* in *pokol* may be the Classic Maya variant of a vowel harmonic derivational suffix *-Vl* (maybe due to a process of progressive vowel harmonization).

The expression *upokol che'eb'* or *u-pok-ol che'eb'* would mean something like “(it is) the cleaning-bowl (of the) quill (...)” or “(it is) the ink-pot (of the) quill (...)” (cf. Boot 1997, 2003b).

---

Vessel Type No. 15: *tzimal jay uk'ib'*



Source: Kerr No. 0530

Style: Central Peten (?)

Transcription:        **'u tzi-ma-li ja-yi yu-T77.WING-b'i**  
Transliteration:       *utzimal jay yuk'ib'(il)*

This unique vessel type is spelled **'u tzi-ma-li ja-yi T77.WING-b'i** for *utzimal jay yukib'*. The root of the expression *utzimal* seems to be *tzima'*, an item that refers to “thin gourd” in Chol and Tzotzil (cf. Reents-Budet 1994: Fig. 4.19). The suffix *-al* in *tzimal* may be a contraction of *-a'-al* in which the *-al* suffix is present to derive an attributive adjective (thus *utzimal* < *\*u-tzima'-al*), as it precedes and thus may modify *jay* “clay bowl”. If correct, the scribe of this text indicated that the *jay* or “clay bowl” was shaped after a “thin gourd” or *tzima'*. The vessel type expression *utzimal jay yuk'ib'* or *u-tzima'-al jay y-uk'-ib'* may mean “(it is) the thin gourd-like clay bowl, the drink-instrument (...)”.

---

Vessel Type No. 16: *tz'ik*



Source: The Hokeb Ha' Vase (Kerr No. 2699) (drawing by Christophe Helmke)

Style: Hokeb Ha

Transcription:        **'u? tz'i-ku**  
Transliteration:      *utz'ik*

Recently Christophe Helmke identified a possible new vessel type collocation in the short PSS on the Hokeb Ha' Vase (Belmopan Museum Number 28/179-5:7). This vessel was part of an offering of twenty-four complete or nearly complete vessels found in the cave named Hokeb Ha' "Where The Waters Enters The Earth" (cf. McNatt 1996: 84; Palacios 1977). The vessel type collocation, according to my estimation, may be transcribed **'u? tz'i-ku** (at present I take the three hooks suffixed to the possible **'u?** to be part of the sign, not an additional sign) for *utz'ik*. In Mayan languages *tz'ik* means "clay, clay object". The vessel type *utz'ik* or *u-tz'ik*, in large part following the suggestion by Helmke, may thus mean "(it is) the clay object" (note 4).

---

Vessel Type No. 17: *ub'*



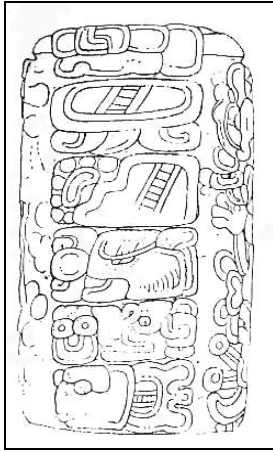
Source: Kerr No. 3034, 4681 & 1335

Style: Naranjo, Altun Ha' &  
Codex Style related

Transcription:        **yu-b'i**  
Transliteration:      *yub'*

There is quite a large selection of Classic ceramics that contains a PSS that refers to the vessel type as **yu-b'i**. In the past it has been suggested that **yu-b'i** might be an underspelling or abbreviation for the vessel type *yuk'ib'* (as «*yuch'ab*», cf. Reents-Budet 1994). The frequent use of the **yu-b'i** spelling, especially in the closely related styles from Naranjo and Altun Ha', however, is suggestive of the fact that **yu-b'i** would lead to a legitimate Classic Maya gloss *yub'*.

Interestingly, there is a short inscription carved on a small column that contains a PSS related text (*lay t'ab'(? )ay yub' ch'a-GIII (...)*, "here, this one made proper *yub'* of Ch'a-GIII ...") in which the spelling **yu-B'AH** seems to refer to the object itself. The iconography and calligraphic style of the text on this small column direct to an Early Classic origin:



drawing courtesy Stephen Houston

While T757 is probably a logograph with the value **B'AH** it often behaves much like a syllabic sign **b'a**; examples of this specific behavior can be found in collocations like the more common **T757-ka-b'a** or **B'AH-ka-b'a** and the rare **b'a-ka-T757** or **b'a-ka-B'AH** (e.g. Palenque, Tablet of the 96 Glyphs: J4) for *b'ahkab'* (note 5).

In colonial Yucatec Maya there is an item *ub'* which means “stained or spotted, smeared thing in part with colors or painted”; although tentative, the Classic Maya item *ub'* may have had the meaning of “smeared or painted object”. If correctly identified, the **yu-b'i** spelling is thus not an abbreviation for *yuk'ib'*, but it leads to a proper legitimate item *ub'*. The gloss *yub'* or *y-ub'* would mean “(it is) the smeared or painted object (...)”.

---

Vessel Type No. 18: *ub' uk'ib'*



Source: Kerr No. 7190

Style: Central Peten (?)

Transcription: **yu-b'i-li? yu-T77.WING-b'i**

Transliteration: *yub'il yuk'ib'*

Possible confirmation of the fact that *ub'* is a legitimate Classic Maya item may be found in the present vessel type example. This unique example seems to spell **yu-b'i-li? yu-T77.WING-b'i** for *yub'il yuk'ib'*. Here *ub'* and *uk'ib'* form a pair, good evidence that *ub'* is not an abbreviation for *uk'ib'*. This observation is strengthened additionally through the fact that in its possessed form as employed here it obtains the common possessive suffix *-il*; if *yuk'ib'* would obtain a possessive suffix it would have been *-il* too, but when present indicated by a terminal **-la** suffix (see Example No. 20). The paired expression *yub'il yuk'ib'* or *y-ub'-il y-uk'-ib'* may mean “(it is) the painted object, the drink-instrument (...)”.

As can be noted, this is not a painted vessel, but an incised vessel. The PSS text itself does refer to the *tz'ib'* - “to paint; to write” stem through the spelling **tz'i b'i**:



There are several other PSS texts that are incised, but which contain the *tz'ib'* “to write, to paint” stem (e.g. Kerr No. 2873 [also containing the vessel type *yub'*], Kerr No. 3684).

Vessel Type No. 19: *uk'*



Source: Kerr Nos. 0791, 1728, 5453 & Altar de Sacrificios Vase

Style: Ik' Site/Altar de Sacrificios

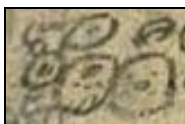
Transcription: **yu-DRINK**  
 Transliteration: *yuk'*

This collocation occurs in a small selection of PSS texts in the Ik' style and on the Altar de Sacrificios Vase. The collocation opens with the syllabic sign for **yu**, followed by either T128 or its so-called HALF.HEAD variant with infixed T501var **HA'**. There is also an anthropomorphic head variant which depicts the sign for *ha'* “water” over the mouth (Kerr No. 5453). As David Stuart has suggested, this particular logographic sign probably represents **'UK'** DRINK in Classic Maya writing. In many Mayan languages *uk'*- or *uch'*- means “to drink”. The collocation *yuk'* or *y-uk'* would mean “(it is) its drink(-thing) (...)”.

A rare example provides the unpossessed form of *yuk'*. It can be found on Kerr No. 1339, spelled **'u-DRINK** for *uk'* (compare to unpossessed forms of *yuk'ib'* below):



Some epigraphers have suggested that the **yu-DRINK** collocation may have been an abbreviation to spell *yuk'ib'*. There are spellings of **yu-DRINK-b'i**:



These spellings, to be found on Kerr No. 1226 (Codex style) and Kerr No. 0635 (Naranjo style, painted by A[j] Maxam, scribe of royal descent), do specifically include the syllabic sign **b'i**. Is this also a case of abbreviation? At present it is too early to conclude that the spellings **yu-DRINK** and **yu-DRINK-b'i** both lead to *yuk'ib'*.

---

Vessel Type No. 20: *uk'ib'*



Source: Kerr Nos. 3230, 3433 & 0518

Style: Codex (and related styles)

Transcription:        **yu-T77.WING-b'i**  
Transliteration:      *yuk'ib'*

This particular vessel type is the most commonly recorded vessel type, especially on Codex style ceramics. The collocation spelled **yu-T77.WING-b'i** leads to the gloss *yuk'ib'*, the root of which is the item *uk'ib'*, glossed earlier as “drink-instrument”. The three spellings above provide an overview of the variety in which this particular vessel type was spelled. In nearly all cases the normal sign for **yu** was used, as well as the different signs cataloged as T77.WING, possibly syllabic **k'i**? (cf. Mora-Marín 2000, Stuart 2002).

The most variety occurs in the sign that represents the syllabic sign **b'i**. The syllabic sign **b'i** can be represented by T764.SERPENT (with or without an infixed **b'i**; possibly derived through a process of acrophony from *b'ik'~b'ich'* “move like a serpent”), T585 **b'i**, and the FOOT.PRINT/ROAD (derived through a process of acrophony from the noun *b'ih* “road”) (see note 5).

Scribes who painted two PSS texts on a single ceramic vessel often used different variants for *yuk'ib'*, as can be seen in the following example (Kerr No. 5452) (also note the different reading order):



Other scribes only inscribed one single PSS, but included two collocations for *yukib'*, each in a slightly different spelling (Kerr No. 5454):



The “doubling” of a single collocation in the PSS occurs in rare cases, but there are other examples. For instance, Kerr No. 1348 records **ji chi ji-chi** in two different spellings, while Kerr No. 1810 records twice the collocation **ta-yu-ta-la** in the same spelling.

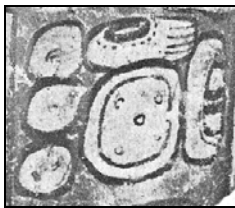
Yet other PSS texts provide the item *uk'ib'* without the third person possessive suffix *y-*, like in the examples on the next page (Kerr No. 0703 & Kerr No. 6436):



The spelling of the vessel type *yuk'ib'* or *y-uk'-ib'* “(it is) the drink-instrument (...)” normally is simply written **yu-T77.WING-b'i**, but there are several examples that seem to indicate that this spelling is in free substitution with **yu-T77.WING-b'i-la** (e.g. Baking Pot, Belize [Colas et al. 2002: Fig. 5a, drawing by Christophe Helmke], Kerr No. 1810, & Kerr No. 3229):



The spelling **yu-T77.WING-b'i-la** leads to *yuk'ib'il*. In the gloss *yuk'ib'il* the *y-* would provide the third person possessive suffix and *-il* would be a possessive suffix. Like *yuk'ib'* (perhaps *y-uk'-ib'-Ø*, or a possible abbreviated spelling?) the expression *yuk'ib'il* or *y-uk'-ib'-il* would mean “(it is) the drink-instrument (...)”. At present I am familiar with one example of the spelling **yu-T77.WING-b'i-li**. It can be found on a sherd of a Nebaj style ceramic vessel (illustrated in Castro 1995: Tafel 7, image provided to Castro by Dieter Dütting) (cf. Dütting 1972: Figure 12):



This unique example provides a harmonic spelling of the (optional) *-il* possessive suffix (cf. Boot 2005).

Vessel Type No. 21: *uk'ib' jay*



Source: Kerr No. 4925

Style: Chocholá

Transcription: **yu-T77.WING-b'i**  
 Transliteration: *yuk'ib' ujay*

This is probably a variant of the vessel type *ujay yuk'ib'* as recorded as Example No. 8. Here the paired expression is *yuk'ib' ujay* or *y-uk'-ib' u-jay* for “(it is) the drink-instrument, the clay bowl (...)” (note that the hieroglyphic text has to be read from right to left).

---

Vessel Type No. 22: *uk'ib' jawa[n]te'*



Source: Kerr No. 5723

Style: Holmul

Transcription: **yu-T77.WING-b'i 'u-ja-wa-TE'?**

Transliteration: *yuk'ib' ujawa(n)te'*

This eloquent “chip-and-dip” tripod plate records a unique vessel type expression. It opens with *yuk'ib'* and it is followed by *ujawa(n)te'* (cf. Reents-Budet 1994: 82, Fig. 3.12). As such this vessel type expression *yuk'ib' ujawa(n)te'* or *y-uk'-ib' u-jawa(n)te'* may mean “(it is) the drink-instrument, the wide-mouthed container (...)”.

Plates sometimes contain “confusing” vessel type collocations. For instance, the PSS on a tripod plate cataloged as Kerr No. 5961 only contains the collocation *yuk'ib'* (was *jawa(n)te'* actually abbreviated or understood from context?), while another tripod plate cataloged as MSH019 is simply named *ulak* (cf. Reents-Budet 1994: Fig. 3.13).

---

Vessel Type No. 23: *we'em*



Source: Kerr No. 5458

Style: Early Naranjo

Transcription: **'u EAT-ma**

Transliteration: *uwe'em*

This unique vessel type expression was discussed first by Marc Zender (2000: 1044). The spelling **WE'-ma** would lead to *we'em*. The reading **WE' EAT** has been suggested by David Stuart. The *-Vm* suffix would derive an instrumental noun from an intransitive verb root, as in modern Ch'orti'. The vessel type *we'em* seems to be a variant of *we'ib'*, as discussed in Example No. 11. If correct, *uwe'em* or *u-we'-em* may mean “(it is) the eat-instrument (...)”.

---

Vessel Type No. 24: (SPLIT.SKY) *jay ub'(?)*



Source: Kerr No. 1743

Style: Uaxactún

Transcription: **SPLIT.SKY-na ja-yi yu-b'i**

Transliteration: *pa'chan(?) jay yub'(?)*

There is one particular style of ceramics that includes a hieroglyphic sign that no other ceramic style includes. The Uaxactún style ceramics regularly include the sign T562.SPLIT.SKY. This sign is generally identified as a direct reference to the Uaxactún polity, as the T562.SPLIT.SKY logogram constitutes the main sign of the Uaxactún “Emblem Glyph” (cf. Reents-Budet 1994: 138 & note 40). The T562.SPLIT.SKY logograph is a combination of T299.SPLIT with T561.SKY. Recently I suggested that T299.SPLIT has the logographic value **PA'** (cf. Boot 2004; compare to Martin 2004). Combined with T561.SKY, the T562.SPLIT.SKY logograph may be transliterated as *pa'chan* (*chan* as the Classic Maya item for “sky”; note the T23 **na** sign as phonetic complement). As such the Uaxactún polity or site may have been known in the Classic period as Pa'chan “Split Sky” (the same reading applies to one of the Yaxchilán polity “Emblem Glyphs”).

In this particular case the spelling **yu-b'i** may actually be an abbreviation of **yu-T77.WING-b'i** (compare to Example No. 25 below), as **yu-b'i** spellings are not common to the Uaxactún style (the present example is unique). However, as suggested above I consider the spelling **yu-b'i** to lead to *yub'* or *y-ub'*, a Classic Maya item for a vessel type (see Example Nos. 17 & 18).

If the present vessel type expression is correctly identified, *pa'chan(?) jay yub'(?)* or *pa'chan(?) jay y-ub'(?)* may mean “Pa'chan clay bowl is the smeared or painted object (...)”.

---

Vessel Type No. 25: (SPLIT.SKY) *jay uk'ib'*



Source: Kerr No. 4605

Style: Uaxactún

Transcription: **SPLIT.SKY ja-yi yu-T77.WING-b'i**

Transliteration: *pa'chan(?) jay yuk'ib'*

The previous vessel type was spelled *pa'chan(?) jay yub'*, a rare denominator for Uaxactún style ceramics. The common vessel type expression to be found on Uaxactún style ceramics is *pa'chan(?) jay yuk'ib'* or *pa'chan(?) jay y-uk'-ib'*, an expression with the meaning “Pa'chan clay bowl is the drink-instrument (...)”.

---

Vessel Type No. 26: (SPLIT.SKY) *lak we'ib'*



Source: private collection (drawing by the author) Style: Uaxactún



Transcription:           SPLIT.SKY **la-ka 'u-WE'-'i-b'i-li**  
Transliteration:         *pa'chan(?) lak uwe'ib'il*

Recently I identified a new vessel type as contained in the PSS on a Uaxactún style ceramic plate (cf. Boot 2003c). Also this vessel type opens with the SPLIT.SKY composite sign, that possibly can be transliterated as *pa'chan*. It is followed by **la-ka**, with a rather uncommon sign for **ka** (a “fish-sign” **ka** with elongated lips; note Kerr No. 6618, another Uaxactún style vessel). The next series of hieroglyphic signs spells **'u-WE'-'i-b'i-li** for *uwe'ib'il*, a rare instance in which *we'ib'* “eat-instrument” carries a possessive suffix *-il*. In its full form *pa'chan(?) lak uwe'ib'il* or *pa'chan(?) lak u-we'ib'-il* can be translated as “Pa'chan(?) plate is the eat-instrument (...)” (note 6).

## Final Remarks

In this essay a total of twenty-six different vessel type expressions have been illustrated and discussed. Several vessel type collocations seem to indicate that the original form was taken from a natural object (*utzimal jay yuk'ib'*, *ujay uchu'b'al che'eb'*) or that the material was originally vegetal (*ujawa[n]te'*). Certain Classic Maya ceramics obtained a surface treatment that seems to indicate that certain cylindrical vessel originally were made of wood (e.g. Kerr No. 6069). In the present day different types of gourds still are used as receptacles for liquids and solid food stuffs, while sections of large bamboo trunks are cut to the size of a cylindrical vessel and used to serve liquids. Bamboo, many species of which are native to the Americas, may even have been the original material of which cylindrical vessels were made (Olsen Bruhns 1994: 72). In the Classic period certain receptacles were mass produced in ceramic material, while only a small selection of those ceramic receptacles obtained an elite function. Certain hieroglyphic texts on these elite ceramic wares obtained vessel type expressions hinting at their original shape, material, and function (*we'ib'* “eat-instrument”, *uk'ib'* “drink-instrument”) while others obtained metaphorical proper names as *yotot* “(it is) the home (...)”, *ulak yotot uk'inil uchanil* “(it is) the plate, the home (of) the sun, (of) the sky (...)”, and *yaja(la)jib'* “(it is) the wake up or awake-instrument (...)”.

I do not pretend that the present overview is complete, there might be additional vessel type collocations. Classic Maya ceramics in public and/or private collections may provide additional vessel types as well as the Classic Maya ceramics of which slides can be found at the Dumbarton Oaks Slide Archive. These collections may also provide additional examples of vessel types currently being unique through the existence of a single example. Hopefully in the future those additional vessel types and examples can be added to the above overview.

## Acknowledgments

I thank Justin Kerr for developing and maintaining the growing Maya Vase Data Base of rollout photographs on the web, without which in large measure the research on which this essay is based would not have been possible. I thank Stephen Houston for his kind permission to include the drawing of a small Early Classic column, Joel Skidmore for including (part of) his photograph of the plate in the Pomoná museum, Christophe Helmke for sharing the drawing of and his thoughts on the Hokeb Ha' vase as well as comments on previous versions of this essay, Donald Hales for directing my attention to the 1972 Dütting article and providing a high resolution digital image of the Nebaj style sherd illustration, and the owner of the Collection Zigas for the photograph of the small discoid-shaped flask. As always, unless noted otherwise, the opinions expressed in this essay are mine.

## Notes

- 1) The original database was started in 1983-84 and it served the writing of a thesis on the Primary Standard Sequence in 1985. The database was digitalized in 1998 and has grown progressively ever since to now contain over 575 examples.
- 2) The illustrations of the vessel type collocations in this essay are derived from a large selection of published sources, referred to in the individual descriptions, as well as unpublished drawings and photographs. All full rollout Kerr photographs can be found in the online Maya Vase Data Base (Kerr n.d).
- 3) In this essay the following orthography will be employed: ', *a*, *b*', *ch*, *ch*', *e*, *h*, *j*, *i*, *k*, *k*', *l*, *m*, *n*, *o*, *p*, *p*', *s*, *t*, *t*', *tz*, *tz*', *u*, *w*, *x*, and *y*. In this orthography the /h/ represents a glottal aspirate or glottal voiced fricative (/h/ as in English "house"), while /j/ represents a velar aspirate or velar voiced fricative (/j/ as in Spanish "joya") (cf. Grube n.d). There is no reconstruction of complex vowels based on disharmonic spellings, as suggested by Houston, Stuart, and Robertson (1998), a proposal amended and extended by Lacadena and Wichmann (2004). I direct the reader to a counter proposal recently put forward by Kaufman (2003), according to which disharmonic spellings may hint at the quality of the most common -*VI* («-V:l») suffix. This proposal will not be applied either in this essay. In the transcription of Maya hieroglyphic signs uppercase bold type face letters indicate logograms (e.g. **'UK'**), while lowercase bold type face letters indicate syllabic signs (e.g. **yu**). Items placed between square brackets are so-called infixed signs; order of the transcribed signs indicates the epigraphically established reading order (e.g. **ji[b'i]**). Queries added to transcribed values express doubt on the assigned logographic or syllabic value (e.g. **k'i?**). All reconstructions (i.e. transliterations) in this essay are but approximations of the original intended Classic Maya ("epigraphic") linguistic items (cf. Boot 2002: 6-7). Items placed between double pointed or angular brackets are items written in a different orthography reflecting the cited source (e.g. «ja:y»). Occasional citing of so-called T-numbers (e.g. T1000a) refers to the hieroglyphic signs as numbered and cataloged by Thompson (1962); the coding as employed in Macri andLooper (2003) is not followed here.
- 4) Helmke suggested a transcription **'u-ma tz'i-ku** for *um tz'ik*, in which *um* is of unknown meaning (note the similarity to **ma** in the spelling **tzi-ma-li**). If indeed a **ma** syllabic sign is present, alternatively **'u-ma tz'i-ku** may lead to *u-ma(h) tz'ik*, in which *ma(h)* ("false"?) may modify *tz'ik* "clay object". Independent of the suggested transcriptions, *tz'ik* "clay object" is basic to all.
- 5) While epigraphers generally make a strict separation in transcription between syllabic signs and logographic signs, this separation may actually be artificial (compare to Coe and Van Stone 2000: 161). As such pairings as T115 LEAF **YOP/yo**, T757 GOPHER **B'AH/b'a**, and FOOT.PRINT/ROAD **B'IH/b'i** may not only hint at a process of acrophony, but also at the fluid sound based sign system the Maya employed.
- 6) Note the vowel harmony in the spelling of the final suffix in **'u-WE'-i-b'i-li** and **yu-T77.WING-b'i-li** in contrast to the more common **yu-T77.WING-b'i-la** (see Example No. 20).

## References

Anonymous

1976 *Mystery of Man, Magic of Things: Masterpieces from the Royal Museums of Art and History*. Brussels, Belgium: Palais des Beaux-Arts.

Boot, Erik

- 1985 *The Hieroglyphic Sequence - Primary and Secondary Texts on Maya Ceramics. A Study of the Primary Standard Sequence*. Unpublished minor Master's thesis. Leiden, the Netherlands: Department of Archaeology, Leiden University.
- 1997 Classic Maya Vessel Classification: Rare Vessel Type Collocations Containing the Noun *cheb* "Quill". In *Estudios de Historia Social y Económica de América*, **15**: 59-76.
- 2002 A Preliminary Classic Maya-English, English-Maya Vocabulary of Hieroglyphic Readings. *Mesoweb Resources*.  
URL: <http://www.mesoweb.com/resources/vocabulary/index.html>
- 2003a A Comment of the Initial Sign of Kerr No. 4961. *Mayavase.com*.  
URL: <http://www.mayavase.com/com4961.pdf>
- 2003b The Hieroglyphic Texts of Kerr No. 7786 and 4669: Performance and Competence of a Late Classic Maya Master Scribe. *Mesoweb Features*.  
URL: <http://mesoweb.com/features/boot/4669-7786.pdf>
- 2003c A New Classic Maya Vessel Type Collocation on a Uaxactun-style Plate. *Mayavase.com Essays*. URL: <http://www.mayavase.com/bootplate.pdf>
- 2004a Classic Maya Plates Identified with a Rare Vessel Type spelled as **ya-ja ji-b'i** and **ya-ja-la ji[b'i]**. *Wayeb Notes* **12**.  
URL: [http://www.wayeb.org/notes/wayeb\\_note0012.pdf](http://www.wayeb.org/notes/wayeb_note0012.pdf)
- 2004b T229 SPLIT as the Logographic Sign for **PA'**. *Wayeb Notes* **13**.  
URL: [http://www.wayeb.org/notes/wayeb\\_note0013.pdf](http://www.wayeb.org/notes/wayeb_note0013.pdf)
- 2005 A Short Note on a Unique Vessel Type Spelling: **yu-k'i?-b'i-li**. *Mayavase.com Essays*. URL: <http://www.mayavase.com/kibi.pdf>

Castro, Inés de

- 1995 *Die Gefäße im Nebaj-Stil und die Ikonographie von Tributdarstellungen auf klassischen Maya-Vasen*. Unpublished thesis (Magisterarbeit). Bonn, Germany: Seminar für Völkerkunde, Bonn University.

Coe, Michael D.

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

Coe, Michael D., and Mark Van Stone

- 2000 *Reading the Maya Glyphs*. London: Thames & Hudson.

Colas, Pierre Robert, Christophe G. B. Helmke, Jaime J. Awe, and Terry G. Powis

- 2002 Epigraphic and Ceramic Analyses of Two Early Classic Maya Vessels from Baking Pot, Belize. In *Mexicon*, **24** (2) : 33-39.

Culbert, T. Patrick

- 1993 Ceramics of Tikal: Vessels from Burials, Caches and Problematic Deposits. *Tikal Report*, **25A**. Philadelphia: The University Museum, University of Pennsylvania.

- Dütting, Dieter  
1972 Hieroglyphic Miscellanea. In *Zeitschrift für Ethnologie*, **97** (2): 220-256.
- Graham, Ian, and Eric Von Euw  
1977 *Corpus of Maya Hieroglyphic Inscriptions, Volume 3, Part 1: Yaxchilan*.  
Cambridge: Peabody Museum of Archaeology and Ethnology, Harvard University.
- Grube, Nikolai  
1990 The Primary Standard Sequence on Chochola Style Ceramics. In *The Maya Vase Book, Volume II*, edited by Justin Kerr, pp. 320-330. New York: Kerr Associates.  
1993 Molded pottery flask of unknown provenance. In *Mexicon*, **15** (3): cover + 46.
- Helmke, Christophe G. B.  
n.d *Molded-Carved Vases as Indicators of Social Status of Cave Users in the Terminal Classic*. Paper presented at the 64<sup>th</sup> Annual Meeting of the Society for American Archaeology, Chicago. Copy in possession of the author.
- Houston, Stephen D.  
1998 Classic Maya Depictions of the Built Environment. In *Function and Meaning in Classic Maya Architecture*, edited by Stephen D. Houston, pp. 333-375. Washington, D.C.: Dumbarton Oaks Research Library and Collection.
- Houston, Stephen D., John Robertson, and David Stuart  
2001 Quality and Quantity in Glyphic Nouns and Adjectives. *Research Reports on Ancient Maya Writing*, **47**. Washington, D.C.: Center for Maya Research.
- Houston, Stephen D., David Stuart, and John Robertson  
1998 Dysharmony in Maya Hieroglyphic Writing: Linguistic Change and Continuity in Classic Society. In *Anatomía de una civilización: Aproximaciones interdisciplinarias a la cultura maya*, edited by Andrés Ciudad Ruíz et al., pp. 275-296. Madrid: Sociedad Española de Estudios Mayas.
- Houston, Stephen D., David Stuart, and Karl A. Taube  
1989 Folk Classifications of Classic Maya Pottery. In *American Anthropologist*, **91** (3): 720-726.
- Houston, Stephen D., and Karl A. Taube  
1987 "Name-Tagging" in Classic Maya Script: Implications for native classifications of ceramics and jade ornament. In *Mexicon*, **9** (2): 38-41.
- Kaufman, Terrence  
2003 A Preliminary Mayan Etymological Dictionary (with the assistance of John Justeson). *FAMSI Grantee Report*. URL: <http://www.famsi.org/reports/01051/pmed.pdf>
- Kerr, Justin  
n.d The Maya Vase Database: An Online Archive of Rollout Photographs. *FAMSI Research Materials*. URL: <http://research.research.famsi.org/Kermaya.html>

Lacadena, Alfonso

- 1997 *Comments on the (u-)ha-yi Compound in The Primary Standard Sequence*. Paper presented at the First Leiden Maya Symposium/Second European Maya Conference, December 19-21 1997, Leiden University, Leiden, the Netherlands. Copy in possession of the author.

Lacadena, Alfonso, and Soeren Wichmann

- 2004 On the Representation of the Glottal Stop in Maya Writing. In *The Linguistics of Maya Writing*, edited by Soeren Wichmann. Salt Lake City, UT: University of Utah Press.

Lopes, Luís

- 2003 *The Maan Polity in Maya Inscriptions*. Manuscript, dated February 3, 2003. Copy in possession of the author.

Love, Bruce

- 1987 Glyph T93 and Maya "Hand-scattering" Events. *Research Reports on Ancient Maya Writing*, 5. Washington, D.C.: Center for Maya Research. Online version available at URL: <http://www.mesoweb.com/bearc/cmr/RRAMW05.pdf>

MacLeod, Barbara

- 1990 *Deciphering the Primary Standard Sequence*. Unpublished Ph. D. dissertation. Austin, TX: Department of Anthropology, University of Texas.

Macri, M. J., and M. G. Looper

- 2003 *The New Catalog of Maya Hieroglyphs. Volume I: The Classic Period Inscriptions*. Norman: University of Oklahoma Press.

Martin, Simon

- 2004 A Broken Sky: The Ancient Name of Yaxchilan as *Pa'chan*. *PARI Online Publications at Mesoweb*. URL: <http://www.mesoweb.com/PARI/journal/BrokenSky.pdf>

McNatt, Logan

- 1996 Cave Archaeology of Belize. In *Journal of Cave and Karst Studies*, 58 (2): 81-99.

Mora-Marín, David

- 2000 The Syllabic Value of Sign T77 as **k'i**. *Research Reports on Ancient Maya Writing*, 46. Washington, D.C.: Center for Maya Research.

Olsen Bruhns, Karen

- 1994 The Original Maya Cylinder Vase? In *Mexicon*, 16 (2): 72.

Palacios, Joseph O.

- 1977 The Hokeb Ha Vase. In *Belizean Studies*, 5 (2): 27-32.

Reents-Budet, Dorie

- 1994 *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham and London: Duke University Press & Duke University Museum of Art.

Schmidt, Peter, Mercedes de la Garza, and Enrique Nalda (editors)

- 1998 *Maya*. Venice, Italy: Bompiani & CNCA - INAH.

Seler, Eduard

1894 Der Fledermauß-Gott der Maya-Stämme. In *Zeitschrift für Ethnologie*, **26**: 577-585.

Stuart, David

1989 Hieroglyphs on Maya Vessels. In *The Maya Vase Book, Volume I*, edited by Justin Kerr, pp. 149-160. New York: Kerr Associates.

2002 Spreading Wings: A Possible Origin of the **k'i** Syllable. *David Stuart's Notes at Mesoweb*. URL: <http://www.mesoweb.com/stuart/notes/Wings.pdf>

Thompson, J. Eric S.

1962 *A Catalog of Maya Hieroglyphs*. Norman: University of Oklahoma Press.

Zender, Marc

2000 A Study of Two Uaxactún-Style Tamale-Serving Vessels. In *The Maya Vase Book, Volume VI*, edited by Justin Kerr, pp. 1038-1055. New York: Kerr Associates.

### **File History**

First version: July 15, 2002

Revised: July 2002, June-July 2003, March 2004, February & March 2005

This version: March 7, 2005