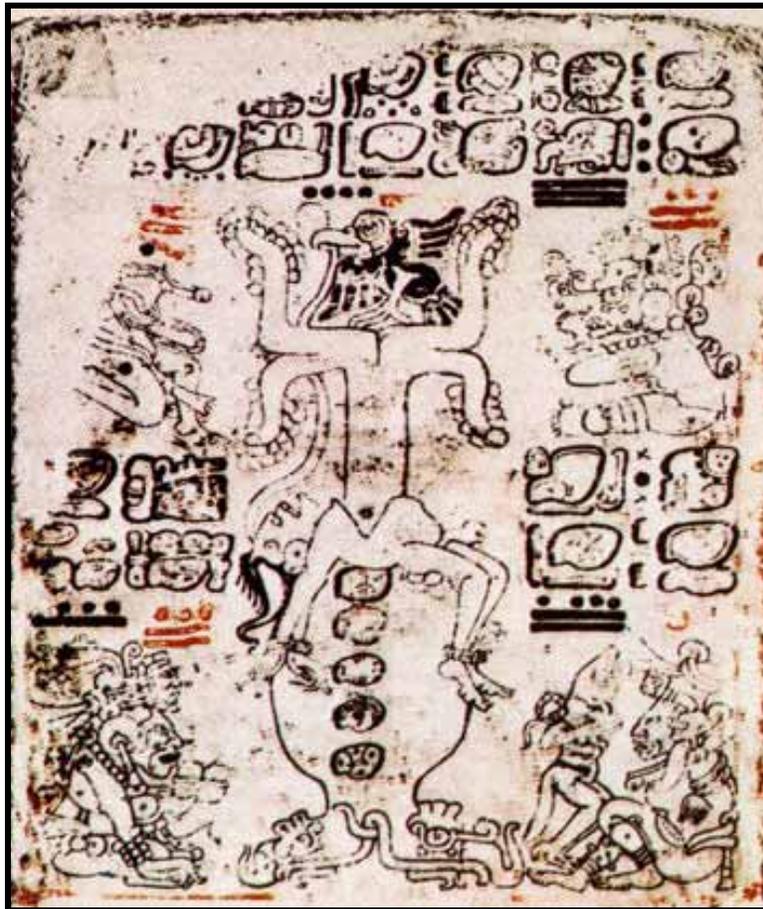


**The First Twenty-Three Pages of the Dresden Codex: The Divination Pages**

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**Based on his May 1996 Thesis submitted to the  
Graduate School of the University of Texas at Austin**

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## **Abstract**

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Contained within the first twenty-three pages of the Dresden Codex are fifty two almanacs. Once used to divine the future, they are now enigmatic expressions of a past era. The almanacs are based on the 260-day ritual calendar, a method of divination still used today by Maya day keepers on the Guatemalan Highlands. While the Dresden Codex as a whole has been studied for more than one hundred years, the first fifty two almanacs are the least investigated. This report provides a commentary for each almanac individually, discussing hieroglyphs, associated images, and day name computations. The almanacs are also viewed as a whole. Through the analysis of the day columns, an underlying order binding all is revealed. Finally, other methods of 260-day divination from around the Maya region, past and present, are compared to the Dresden almanacs seeking parallels through which to better understand their nature.

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## CHAPTER 1: INTRODUCTION

### THE DRESDEN CODEX

The Dresden Codex is one of four surviving hieroglyphic books produced by the Maya prior to the conquest of Mexico. While many other codices from pre-Columbian Mesoamerica exist, only the Dresden, Paris, Madrid, and Grolier Codices were written by the Maya. Exactly where the Dresden was written remains unknown. Iconographic and ethnographic evidence strongly suggest that it was produced in the Yucatan, possibly in the Chichen Itza - Mayapan area (Thompson 1972:16). The date of the book's composition is to this day a subject of debate between scholars. Through careful analysis of base dates within the Dresden, Bricker and Bricker (Aveni 1992:83) have presented evidence narrowing the range to the 13th or 14th centuries. The Bricker's caution, however, that Dresden appears to be a book that was copied and recopied, pasted on for generations and expanded cumulatively over centuries of time. Thus, while the Dresden itself was written at a late date in Maya history, the content of its pages is considerably more ancient.

In terms of its physical appearance, the Dresden Codex is 3.5 meters long, fan folded into 39, 9 centimeter wide pages, 20.4 centimeters high and painted on both sides. The paper itself is made from the fibers of a species of Ficus tree, called *Amate* in Yukatek, and coated with a fine layer of lime plaster. While the texts and numbers are painted in thin line red and black, the associated images are illustrated in beautiful polychromatic detail. Zimmermann (1956) suggested that the Dresden is the work of no less than eight distinct scribes (Thompson 1972:15).

The content of the Dresden Codex was divided by Thompson into three primary topics: 260 day almanacs and 364 day counts of worship and divination, astronomical - astrological material, and prophecies for the *tun* and the *katun* (1972:20). The almanacs and day counts, which occupy the bulk of the codex, concern topics of daily life. They deal with subjects like agriculture, weather, disease and medicine, occupations, marriage, commerce, child birth, and worship schedules. Celestial cycles known to have been recorded in the Dresden include the synodic periods of Venus, Mars, and Mercury, zeniths and equinoxes of the Sun, and eclipse cycles of both the Moon and the Sun. Celestial cycles will be only tangentially discussed in the following pages. The divination almanacs of the Dresden's first twenty three pages are the specific subject of this report.

### PREVIOUS RESEARCH

From the time of its departure from the Yucatan, sometime shortly after the conquest, the Dresden Codex remained virtually unknown for two hundred years. It reemerged in 1739 when it was purchased from a private owner in Vienna by Johann Christian Gotze, then Director of the Royal Library of Dresden. Almost one hundred years later, Lord Kingsborough published the first accurate facsimile of the codex in Volume 3 of his Antiquities of Mexico series (1831-1848). This marked the first time interested scholars had access to copies of the rare document. Still, decades pasted before the first thorough study of the Dresden's contents was produced.

In 1880, a then young scholar named Ernst Forstemann published the first investigation of the book's subjects. It was written to complement his new facsimile, a flawless color reproduction of the Dresden produced through the use of the contemporaneously developed technique of chromolithography. That work was to mark the beginning of a 30 year string of steady publications on the Dresden and other topics from Forstemann. In 1892, he corrected the pagination order of the book, restoring it to its intended form. His original 1880 chromolithography, as well as the Kingsborough edition, were reassembled incorrectly. The codex arrived in Dresden separated into three pieces. One hundred forty three years later, Ernst Forstemann understood it well enough to finally put it back together correctly. He went on to produce the first complete commentary on the Dresden in 1901 and then revised it in 1906.

With momentum from Forstemann's brilliant pioneering efforts, other scholars began joining the quest to decipher the meaning of the mysterious manuscript. Schellhas (1904) produced a study which served to form the base of what we know about the deities of the Dresden. Tozzer (1910) investigated the significance of the animals portrayed in its pages. Special attention was given to understanding the calendrical and astronomical information (Bowditch 1910, Guthe 1921, Wilson 1924). Much of what these early scholars concluded is still accepted today.

The 1930's produced two new facsimiles (Gates 1932, Villacorta and Villacorta 1933) and many new studies on various aspects of the Dresden. The Eclipse Tables were studied in detail by Spinden (1930). The permutations of the Serpent Numbers were explained by Beyer (1933). Villacorta and Villacorta produced a second complete commentary to accompany their 1933 reproduction. It has been said, however, that the Villacorta's commentary is essentially that of Forstemann, written thirty years prior.

In 1955, Yuri Knorozov used the hieroglyphs of the Dresden Codex as the source for examples through which to prove his landmark hypothesis on the nature of decipherment. In a paper entitled *Ancient Writing of Central America*, Knorozov demonstrated that animals portrayed in the Dresden were named in hieroglyphs that phonetically spelled out their names as spoken in modern Yukatek Maya. Contemporary opinion was that all Maya hieroglyphs were logographic, having nothing to do with spoken language. Unfortunately, Knorozov's research was swept under the rug of the Cold War until 20 years later. The 1950's also produced the second great study of Yukatek gods as understood through the Dresden (Zimmermann 1956). It was through the study of the Dresden and the other Maya codices that the letter designation system, still used to identify Maya deities, was developed.

In 1972, the preeminent Maya scholar J. Eric Thompson produced the single most comprehensive commentary on the Dresden Codex available today. Towards the end of a prolific career as the student of Maya culture, Thompson focused his attention on the Dresden. Though his dogmatic stance on the nature of Maya hieroglyphs has since made the majority of his translations obsolete, Thompson's use of ethnography to explain the images and cycles was the most holistic ever produced. His comparison of the Chilam Balam of Chumayel to the Dresden was key to the strength of his interpretations. Many of Thompson's insights will be conveyed in the following commentary.

Starting in the late seventies, in conjunction with the growing acceptance of phonetic decipherments, yet more of the Dresden became understandable. In addition, the growing field of Archaeoastronomy was shedding new light on the functions of the astronomical tables. Over the last decade and a half, Victoria Bricker (1983,1986,1988,1989,1992), Michael Closs (1977,1981,1983,1989,1992), and Floyd Lounsbury (1978,1983, 1992), among others, have used a combination of glyphic translations, calendrical studies, and astronomy to make major contributions towards our knowledge of what phenomena are recorded and for what purposes.

In the 1990's, research continues to reveal new information on the Dresden. Karl Taube's The Major God's of Ancient Yucatan (1992) presented new research on the identities of deities portrayed in the Dresden. Anthony Aveni, one of the forefathers of Mesoamerican Archaeoastronomy, edited a 1992 collection of articles entitled The Sky in Mayan Literature. Included in that collection, Victoria and Harvey Bricker provide a new method through which to cross-date almanacs and tables within the Dresden and Hofling and O'Neil suggest a new interpretation of the Moon Goddess Pages.

As can be seen from the brief summary above, the Dresden has been intensively studied for over one hundred years. Deciphering all its hidden messages may take a hundred more. The research presented in this report, a commentary on the Dresden's first twenty three pages, is in no way meant to be considered definitive. Instead, it should be viewed as a stepping stone along what appears to be a long journey towards full understanding.

### THE FIRST TWENTY THREE PAGES

There are 52 almanacs contained within the first twenty three pages of the Dresden Codex. These almanacs have long been known to have been used for the purposes of divination. An ancient daykeeper would use the almanacs not only to predict the future, but also to determine the root cause of illnesses and misfortune. The first two almanacs, once located on Page 1, are completely destroyed. The remaining 50 almanacs record cycles of 260 days, each containing a different sequence of observed day intervals. The cycles are arranged in one of three ways; 5 rows of 52, 4 rows of 65, or 10 rows of 26 day intervals. Each total 260 days.

The days with which the almanacs are concerned are suppressed and must be derived through calculation. The far left side of each almanac contains a column of day names with a common numeric coefficient. Those day names are added to the numbers appearing horizontally across the middle of the almanacs. The result is a continuous chain of added days until the day that began the cycle is once again reached, 260 days later. The format of the almanacs group the featured days in vertical columns. The number of columns varies from almanac to almanac, from as little as two to as many as twenty. Each column of days is associated with a glyph passage and usually with an image. The glyphic passages contain the prognostications concerning actions performed on those days. The actions, as well as deities influencing the outcomes, are also recorded glyphically. The associated images, in almost every case, illustrate the information written in the passages.

## THE MOON GODDESS PAGES

Pages 16-23 contain the final twenty almanacs of the first fifty two. These twenty almanacs have come to be called the “Moon Goddess Pages”. The Moon Goddess, first identified by Seler (1904:50-52) appears in almost every almanac of this final section. Forstemann did not separate these last twenty from the previous thirty two, calling the entire group, “the first great section of the manuscript, in which tonalamatls are represented in uninterrupted succession.” (1906:110). Thompson’s commentary, building off of Seler’s identification, redefined the final twenty almanacs. He coined the term “Moon Goddess Pages” and designated the group as the second chapter of the Dresden (1972:47). Build yet further on Thompson’s separation, Hofling and O’Neil have presented evidence which suggests the Moon Goddess Pages may have been used in conjunction with the Lunar Pages (Aveni 1992:51-58). The eclipse related day intervals 177, 178, and 148 are possible stopping points in many (but not all) of the almanacs featuring the Moon Goddess. In contrast, Taube’s recent study of the gods of the Yucatan calls the very identity of the Dresden’s Moon Goddess into question (1992:68). While this report does not deny the unique qualities of the final twenty almanacs, all fifty two almanacs will be viewed as a carefully arranged, complete set of divination pages.

## GOALS OF THIS REPORT

As previously mentioned, the present report concerns only the first fifty two almanacs, located on pages 1-23. Thompson called these pages the “subjects least comprehended of all” (1972:32). Though all follow a common format, the subject matter of the almanacs is varied, randomly distributed, and seemingly non-sequential. The primary goal of the Commentary Chapter is to present the almanacs individually, demonstrating for each: the subject, the featured days, the supernaturals influencing the prognostication, and the prognostication itself. The equations that reveal the suppress day columns will be written out in full. Current phonetic translations of key glyphs, and their relationships with associated images, will be offered whenever possible. As a quick reference guide, a listing of augural glyphs and deity characteristics precedes the commentary.

After the Commentary Chapter, two chapters will discuss the system behind the almanacs and their possible applications. Chapter 3 investigates the numerology employed to create the almanacs. In Chapter 4, methods of divination recorded throughout the Maya area are compared to the almanacs, seeking parallels through which to better understand their function.

## CHAPTER 2: COMMENTARY

In many ways, this commentary follows the format created by Thompson in his 1972 commentary. The internal divisions of individual almanacs are termed *t'ols*, a Yukatek term employed by Thompson meaning “computed columns”. The numbering of the almanacs also follows Thompson’s order. Each almanac description includes a *t'ol* by *t'ol* analysis of the passages, images, and associated days. The format for discussing specific glyph blocks differs from previous methods. Instead of numbering each block, the system of designation used for monumental texts is employed. A grid is laid over the almanac text in which letter designations are applied to the horizontal rows and number designations are applied to the vertical columns. Thus, the first glyph block (in the upper left corner) is A1, the second is B1, the third is A2, and so on. This method was chosen to better conform to standard epigraphic studies.

The complete equations indicated by the days and numbers of each almanac are included in the Day Computation sections. The computations reveal the day name *t'ols*. In all almanac but two (Almanac 34 and Almanac 38), the computations create a cycle of 260 days. The visible day names, which appear on the left side of each almanac, do not correlate to the first *t'ol*. In fact, they are arrived at in the final *t'ol*. In other words, the prognostication associated with the introductory day names is found in the final *t'ol*, not the first. For this reason, the visible day names are numbered as the final *t'ol* but placed in the first position. As presented here, the visible day names are capitalized to distinguish them from the unwritten *t'ols*. Figures 1 through 52 are photocopies of the Villacorta 1930 reproduction.

### GLYPHIC PASSAGES

The glyphic passages of the first twenty three pages present an interesting challenge to epigraphers. The general principles of Maya syntax and spelling order (as we perceive them) are not strictly adhered to. The passages, generally no more than four glyph blocks, do not always follow the standard verb-object-subject syntactical order. The Principle of Synharmony (Knorozov 1952) is frequently discarded. The augural glyphs *muk* and *lob*, spelled *mu k'a* and *lo ba*, are two typical examples of this problem. There are also cases of questionable reading order within glyph blocks. For example, the glyphic compound *k'ak' te tun* occurs five times in the first twenty three pages. Sometimes the *te* appears above the *tun* and other times it appears below. The implication is that the order of how a word can be spelled is flexible in the Dresden. The glyph which reads *kuy* is an even better example of this problem. Meaning “owl”, its connection to *Oxlahun Kanal*, the owl deity, makes a strong case for the validity of the reading. The reading order within its glyph block, however, is reversed. *Yu* appears first in the normal reading order and *ku* appears second (Almanac 26). These reading order problems may be evidence of a late expression of the Maya’s love of variation on a theme. If so, many of the unknown glyphs of Dresden should be analyzed for alternative reading orders.

The most common glyphs of the first twenty three pages are those which Thompson designated “augural” (1972). Rather than being straightforward words for good and bad, the augural outcome glyphs appear to be metaphorical statements that allude to positive and negative circumstances. The following is a list of the augural glyphs, with their current translations and frequency of appearance, divided into positive and negative outcome groups.

### Negative Auguries

***an kimil*** - (*Ah*) *kimil* is defined as “death, sickness” (Barrera 1980:318). It occurs 37 times, making it the most common non-name glyph in the first twenty three pages.

***u muk*** - *Muk* is defined as “burial” (Barrera 1980:533). It occurs 33 times.

***nuk men*** - *Nuk* is defined as “big, heavy” (Barrera 1980:582). *Men* is defined as “guilt, sin, blame” (Barrera 1980:520). Together, they may translate “heavy guilt” or “big sin” (Erik Boot 1994, personal communication). It occurs 19 times.

***lob(il)*** - *Lob* is defined as “despair, ruin, bad” (Barrera 1980:454). *Lobil* is defined as “wickedness” (Barrera 1980:455). It occurs 14 times.

***K’ak te tun*** - Literally “fire tree stone”. Suggested to be a metaphor for “drought” (Schele et al. 1994). It occurs 5 times.

***tok’ te ba*** - *Tok’* is a well known glyph referring to “flint”. No good translation for *teb(a)* can be found. However, as discussed in the introduction of this section, if the reading order is reversed from normal order, the word would become *bat(e)*, meaning “hailstorm” (Barrera 1980:39). Known to have negative content (through its context with other negative auguries), a reading of “flint hailstorm” for this augural outcome glyph may fit well. It occurs only twice, in Almanacs 8 and 19.

***matzil*** - The direct translation of this glyph is uncertain. Through its association with known bad auguries, its content is confirmed as negative. Focusing on the *ma-* prefix, it has been suggested that *matzil* is the opposite of *yutzil*, a common positive augural outcome glyph (Schele et al. 1994). It occurs only twice.

Figure 1. Negative Augural Outcome Glyphs

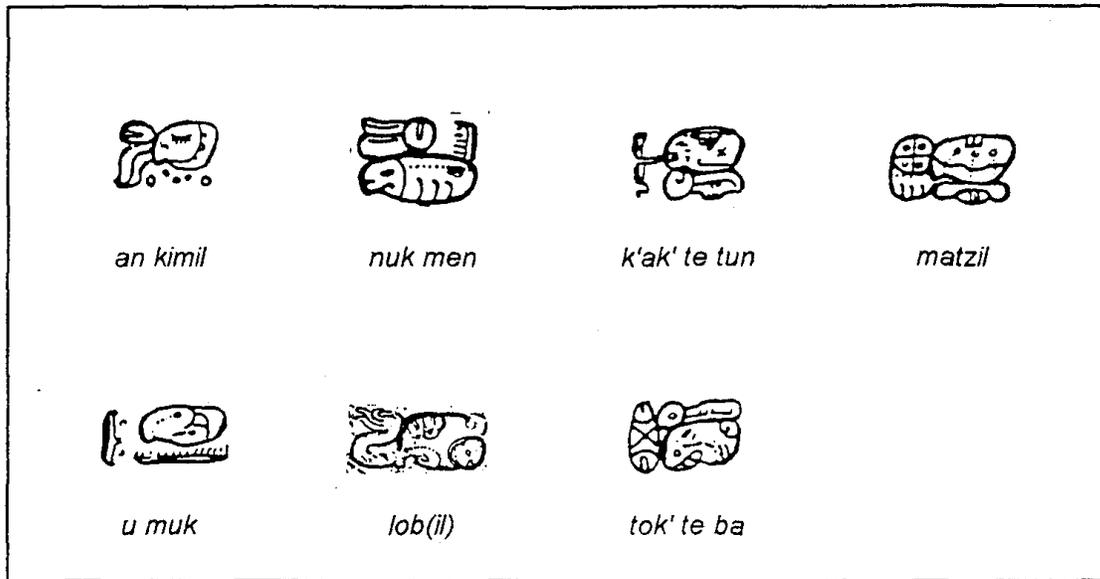
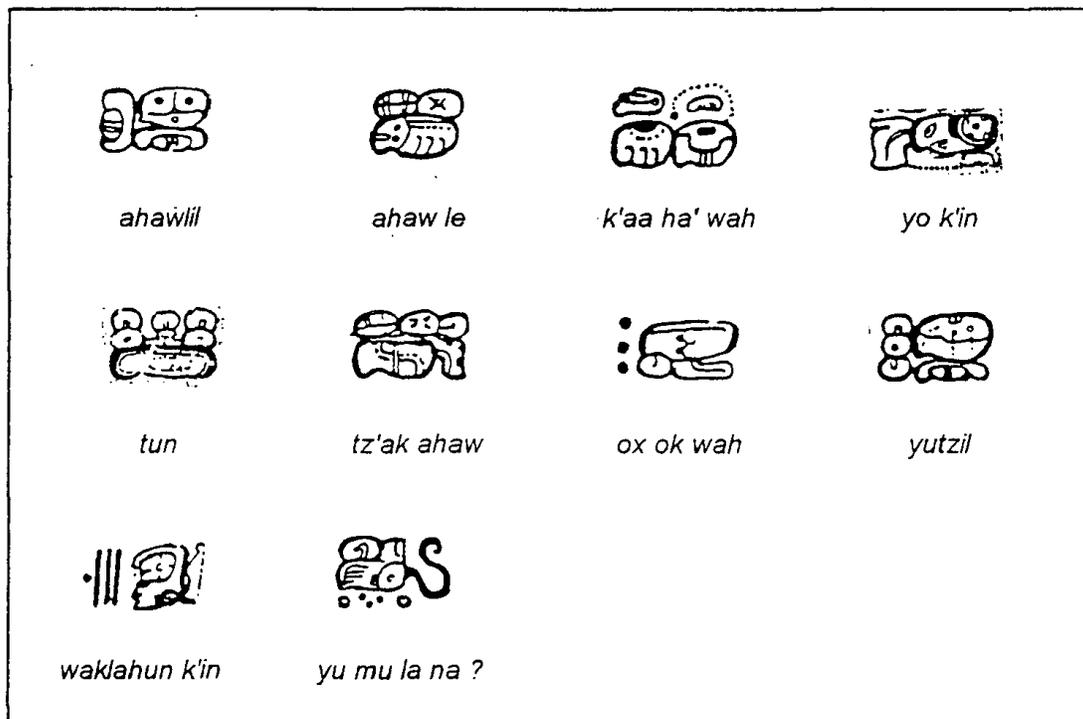


Figure 2. Positive Augural Outcome Glyphs



### Positive Auguries

**ox wil** - *Wil*, meaning “over abundance”, has recently been suggested over the old reading, *ok wah*, “marriage, wedding, wedding invitation” (Schele 1996:pc). *Ox* is the number three. The translation may be “three abundances”.

**k’aa ha’ wah** - The *k’a* sign of this augural glyph was believed until just recently to be *ch’a*. *K’aa* is defined as “abundance” (Barrera 1980:359). *Ha’*, written here as a logograph, is a commonly used word for “water” (Barrera 1980:165). *Wah* is defined as “maize tortillas, bread” (Barrera 1980: 905). Interestingly, *wah* also translates “life in a certain manner”. Joined together, the augural outcome may read “abundance of water and food”. It occurs 20 times.

**ahaw lil** - Thompson translated this augural glyph as *ahaw lil* “rulership” (1972). No better alternatives have been offered. However, if Thompson’s translation is to be accepted, we must acknowledge that the spelling order of this glyph defies normal order. Consistently, one of the two *li* signs that create the *lil* suffix of the word appears in front of the *ahaw* main sign. If read under the normal rules of order, it would spell *li ahaw li*. Nicolai Grube and others have suggested that the sign commonly read as *ahaw*, serving as the central sign in this case, can also be read *nik*, or “flower” (Schele and Grube 1995). Unfortunately, *li nik li* or *nik lil* seem to make little sense in this context.

**ahaw le** - Thompson translated this augural glyph as *ah men* “the worker” (1972). With the advent of phonetic studies, Thompson’s *men* is now interpreted as the syllabic sign *le*. The Cordemex lists five separate definitions for *le* (Barrera 1980:442). Unfortunately, none make sense in this context. The superfix is clearly, *ah po*, meaning “lord”. Whatever its reading, this glyph is clearly positive and occurs 14 times in the first twenty three pages.

**yutzil** - This glyph has been previously read as *utzil* meaning “its good, goodness” (Barrera 1980:901). Its actual spelling, however, is consistently *yutzil*. *Yutzil* is also a positive word, defined in the Cordemex as “beautiful” (1980:984). The *y-* may also be interpreted as a prefix added to *utzil*, marking the word as possessive. It occurs 9 times.

**tz’ak ahaw** - *Tz’ak* has 11 separate listings in the Cordemex (1980:871-872). The first definition is “eternal, a thing without end” (Barrera 1980: 871). Thus, the glyph may translate “unending reign”. A nearly identical reading has also been suggested; “succession of lords” (Schele et al. 1994). Other definitions of *tz’ak* listed in the Cordemex include; “general dimensions of a milpa”, “cord used to measure a milpa”, “tiers of kinship”, “medicine”, “to cure”, “knot”, “to poison with drink”, “to augment”, “to suck or be sucked”. *Tz’ak ahaw* occurs 8 times.

*yo k'in* - Known to be positive through analysis of context, this glyph has been suggested to read *yok k'in*, “base of the sun” (Schele et al. 1994). This reading, however, is flawed due to the inability of the *ka*- sign to function in two words at once. As with *yutzil*, the *y*- prefix of this glyph may mark it as possessive. *Yo k'in* occurs 4 times.

*tun* - The word *tun* is the common Maya word for “stone”. It is also, however, a word meaning specifically the precious stone jade. In his commentary of Almanac 17, Thompson noted that, within the glyph block, the sign above the sign known to be *na* resembles the symbol signifying “jade” (1972:39). It is suggested here that we are looking at a logograph for jade with a *na* sign is a phonetic complement, pronounced *tun*. This glyph has also been suggested to read *i'nah*, meaning “seeds” (Schele et al. 1994). It occurs only twice in the first twenty three pages.

*waklahun k'in* - Literally “sixteen suns (or days)”. This glyph appears only once, in Almanac 5, but in a clearly positive context.

*ya mu la na* (?) - Unknown translation, definitely positive. Appears twice, in Almanacs 6 and 31.

## DEITIES AND BEINGS

The following is a list of deities and beings that occur within the first twenty three pages. Diagnostic traits and roles in Maya mythology will be discussed when possible. For each entity discussed, a total count of associated prognostications will be given. Deities are discussed by order of number of appearances. Total number of appearances was counted not just by the images but also by the occurrence of names in the text. If a deity is both portrayed and named in a t'ol, it is counted as a single appearance. The most current information on the subject of Maya deities used here comes from the work of Karl Taube (1992).

### **The Moon Goddess, Goddess I (Goddess O)**



Her repeated appearance in the “Moon Goddess Pages” makes the Moon Goddess the most frequently portrayed deity of the first twenty three pages. She is also the only truly neutral deity of the pages. All other deities occur, almost exclusively, in only negative or positive prognostications. The Moon Goddesses’ nature depends on whomever or whatever she appears with. She appears with 27 positive, 28 negative, and 3 unknown prognostications, for a total of 58. All but four of those appearances occur within the Moon Goddess Pages.

Goddess I was first recognized as the Moon Goddess by Seler (1904:50-52). It was Thompson, however, who really pushed the identification into popular thought. Going on Seler’s original identification, Thompson used ethnographic information on the Moon Goddess to interpret the subjects of the “Moon Goddess Pages” of the Dresden. He also believed Goddess O to be an aged aspect of the Moon Goddess. Thompson identified identified

both goddess as *Ix Chel*, patroness of medicine, childbirth, and divination in Yucatan. Her name glyph was interpreted *colel*, meaning “lady” (1970:241-249).

Taube believes there is, in fact, little evidence to identify Goddess I as the Moon Goddess, less for Goddess O (1992:64). He identifies the two as separate deities and only Goddess O with the name *Chel*. If Taube’s caution is heeded, Thompson’s interpretations of Goddess I’s actions become suspect of bias thinking. For the sake of continuity (and due to the lack of alternative identifications), she will be referred to as the Moon Goddess in this report.

### Death Gods - God A, God A’, God A”



God A

God A is the most common death god of the first twenty three pages, occurring in one unknown and 30 negative prognostications. He is distinguished from the other death gods by his skeletal body and hunched back. Black spots also distinguish God A. Evidence suggests that his name was *cizin* (Fox and Justeson 1984:38-39). Taube remarked that it seems this deity was not afforded much respect, noting that his appearance is, at times, almost comical (1992:14).



God A'

God A' occurs only three times within the first twenty three pages, all negative prognostications. Instead of skeletal features, the most distinguishing characteristic of God A' is a division sign on his cheek. He also often has a black band across his eye. Both God A and God A' are identified by Taube as underworld deities with origins in Classic Maya mythology. Only God A does he relate to the Central Mexican deity *Mictlantechtli* (1992:17).



God A''

God A'', occurring only once in the pages covered here (Almanac 8), was identified by Thompson as a separate death deity. Blindfold and death symbols lead him to suggest a connection to the Nahuatl god *Ixquimilli* (1972:35).

### Itzamna, God D



Itzamna is a very benevolent deity, occurring in a total of 24 prognostications of the pages covered here; 21 positive, 1 negative, and 2 unknown. Itzamna is one of the most important deities in the Maya pantheon. He is distinguished by his aged appearance and sometimes by the title of ahaw. His name glyph in the Dresden spells out his name clearly, *itz am na*. In the Post-Classic and colonial periods he is associated with priesthood, divination, and esoteric lore. In the Classic period, Itzamna is especially associated with writing (Taube 1992:31-41). In the Dresden, he is linked to the Earth Caiman (Thompson 1972:34). Almanac 14 is the best example of that link.

### The Maize God, God E



First identified by Schellhas (1897), the Maize God has been an important deity of the Maya pantheon from its origins. In the Popol Vuh, the father of the hero twins, once decapitated in the ballcourt at Xibalba, is resurrected. The experience transforms him into the Maize God. While primarily a benevolent deity, Taube points out that he is often associated with death and sacrifice in Post-Classic Yucatan (1992:44). Taube further suggests the association may be due to the planting/burial, harvest/decapitation metaphors known to have been employed by the Maya. Decapitation may also hearken back to the Popol Vuh myth. In the first twenty three pages of the Dresden, the Maize God is strictly benevolent, appearing in 15 positive and 3 unknown prognostications.

### God Q



God Q is said to be a deity of violence, execution, and destruction (Taube 1992:111). Accordingly, he appears in only negative prognostications, 13 total in the first twenty three pages. He is commonly identified by a band curving across his face. Also, due to a two-bar affix to his name glyph, he is associated with the number ten. God Q does not seem to originate in Classic Maya mythology. Though some have drawn parallels to Xipe Totec, of Central Mexican origin (Schellhas 1904, Baudez 1985), Taube suggests God Q is the equivalent of Tezcatlipoca-Itzalacoliuhqui-Ixquimil, Central Mexican deity of stone and execution (1992:112).

## God H



Early studies conflated God H and God CH into one deity (Schellhas 1904:28-31). Zimmermann was the first to separate them (1956). The two are primarily separated by the infix elements in their name glyphs. God H's infix is an inverted *ahaw*, God CH's infix is cross hatching. Both deities are youthful. His character in the first twenty three pages is interesting. Besides the Moon Goddess, God H is the only deity who appears to be neutral. He occurs in 8 positive, 2 negative, 2 unknown, and 1 neutral prognostication, a total of 13. The neutral prognostication, appearing in Almanac 26, is the only one of its kind in the first twenty three pages. Taube remarks that God H is one of the poorest known codical gods. While the Dresden closely identifies him with Itzamna and once portrays him as what Taube identifies as Quetzalcoatl (Almanac 7), he cannot be directly related to any of the known deities, Classic, Post-Classic, or Colonial (Taube 1992:63).

## Oxlahun Kanal, The Owl Deity



The Owl Deity, named *Oxlahun Kanal Kuy* in associated glyphs, occurs 7 times in the first twenty three pages, all in negative prognostications. Thompson termed this deity an “anthropomorphic Muan bird” and suggested the name translates *oxlahun kan* (1972:36). The Muan screech owl is closely identified with rain and the underworld (Thompson 1950:114-115). God L commonly wears a Muan bird headdress. In the Classic period, God L's headdress typically includes the chan glyph, very possibly identifying his bird as Oxlahun Kanal himself (Taube 1992:85).

## Chak, God B



Chak is by far the most frequently depicted deity in the Dresden Codex. Thompson counted 134 times (1972:27). In the first twenty three pages, Chak occurs in only 8 prognostications, 7 positive and 1 negative. The one negative context in which he appears is Almanac 14, the only all-negative almanac. Thus, in terms of auguries, the presence of Chak can be said to be strongly positive. Chak is easily identified by his elongated, down-curving nose. Itzapa Stela 1, dating to the Late Preclassic period, stands as testimony to his antiquity. He has always been considered a lightning and rain deity. During the Classic period, Chak was associated with war and human sacrifice (Taube 1992:27). Despite that previous association, in the Post-Classic pages covered here, his presence is positive and benevolent.

### The Sun God, K'inich Ahaw, God G



The Sun God appears in 6 prognostications of the first twenty three pages, all negative. His name glyph is the *k'in* sign with an *ahaw* superfix. Since the Late Preclassic, the Maya Sun God has been associated with decapitation. The severed head of the Sun God is a common element of royal costumes, as shown on Classic monuments (Taube 1992:52). At Palenque, GIII has been identified as the Sun God (Lounsbury 1985:50). The Sun God is also related to kinship, as demonstrated by the important title of Maya lords, *k'inich*, or “sun face” (Taube 1992:56).

### Ho Pawatun, God N



In the beginning of codical studies God N was believed to be the deity of the five-day Wayeb period (Forstemann 1901:189-192, Schellhas 1904:37-38, Thompson 1950:133-134). In 1970, Thompson overturned that identification in favor of the quadripartite Bacab who supports the heavens. Three years later, Coe identified his name glyph as *pawatun* (1975:15). Pawatun has roots in Classic Maya mythology, as well as Central Mexican equivalents. His portrait glyph is standard to the PSS of Maya ceramic texts. In most regions, he is not only the holder of the sky but also a malevolent deity who threatens at particular calendric and celestial events (Taube 1992:98).

Despite his dual nature, he is primarily benevolent in the pages covered here. Pawatun occurs in a total of 6 prognostications, 4 positive, 1 negative, and 1 unknown.

### God C, K'u



Despite over one hundred years of research, God C has never been directly associated to any known deity. At one time, he was believed to be the deity of the North Star (Schellhas 1904, Morely, Brainerd, and Sharer 1983:475). Taube calls that identification unwarranted (1992:30). His unique face distinguishes God C. Most, but not all, interpret his face as monkey-like. The name glyph of God C is a portrait of his face (or perhaps vice versa). Its phonetic value has long been understood to read *k'u*, meaning “sacredness” (Barthel 1952:94). God C, or at least his name glyph, appears on monuments as far back as the late Preclassic, often on objects (presumably marking them as sacred). Taube suggests that God C is not a deity at all but rather the generalized concept of “sacredness” (1992:30). In the first twenty three pages of the Dresden, God C is primarily benevolent. He occurs in a total of 6 prognostications, 4 positive and 2 negative. Both negative associations occur within the all-negative Almanac 14.

### **Xbalanque, God CH**



As discussed previously, God CH and God H were once considered one in the same, both referred to as the “Chikchan-God” (Schellhas 1904:28-31). The two are distinguished from one another by the infix of their name glyph’s. God CH’s infix is a cross-hatching pattern. God CH’s portrait typically presents him as a youthful deity with jaguar spot patches around his mouth and limbs. Taube identifies God CH as Xbalanque, one of the Hero Twins in the Popol Vuh (1992:60). As such, God CH is, by proxy, associated with hunting. Xbalanque is presumably a benevolent deity. In the first twenty three pages, however, his presence is strongly negative. Appearing in a total of 4 prognostications, 3 are negative, 1 is unknown, and none are positive. Two possible explanations may be given for this seeming incongruity. One; Xbalanque has an as yet unidentified malevolent aspect or, two; God CH is not Xbalanque.

### **K’awil, God K**



Considering his importance in Classic Maya religion, K’awil appears precious few times in the first twenty three pages. He occurs in 1 unknown and 5 positive prognostications, marking him as benevolent. David Stuart (1987b) was the first to identify God K’s name as K’awil. K’awil, with his diagnostic long, upcurving nose and scaly body, has been a part of the Maya pantheon since its earliest expressions. Stuart believes K’awil was worshipped in the Yucatan since the Protohistoric period. Classic and Early Post-Classic monuments present K’awil with wings, identifying him as a celestial deity. He is also associated with lightning, rain, fertile maize, and dynastic descent (Taube 1992:79). Michael Coe suggested that K’awil and the Aztec Tezcatlipoca share important aspects (1972:16).

### **God L**



God L appears as a black colored old man. His headdress frequently includes the Muan screech owl, a bird strongly related to the underworld (Thompson 1950:114-115). Images of God L in the Classic period connect him to rulership and mercantilism (Taube 1992:88). Despite God L’s connection to the Muan Screech owl, he is entirely benevolent in the pages covered here. He appears in a total of 5 times, all in positive prognostications.

### God R



God R appears only twice in the first twenty three pages of the Dresden, both times within positive prognostications. He is distinguished by a kaban sign on his cheek. The name glyph of God R commonly appears with the number eleven as a prefix. Acknowledged as an indicator of God R's antiquity, the face with a kaban curl is the head variant of the number eleven found in Classic inscriptions. These two diagnostic traits, the kaban curl meaning "earth" and the number eleven, lead Thompson to suggest God R is a god of maize and the patron of the number eleven (1950:131). Taube (1992:112) tentatively suggested that God R may be Hunaphu, hero twin of the Popol Vuh. He sites examples of the kaban curl being interchanged with the black dot, a sign known to mark ahawship when placed on the cheek. Hunaphu is frequently identified by the spot on his cheek. God R's association with the number eleven seems incongruent with his identification as Hunaphu. Taube cautions "it remains to be seen whether God R is actually an aspect of this being" (1992:115).

### Hun Ahaw, God S



Hun Ahaw, hero twin of the Popol Vuh, appears only once in the first twenty three pages, in Almanac 3. Surprisingly, he is associated with a negative prognostication. Taube notes that for the Post-Classic period of Yucatan, Hun Ahaw had strong connections of death and sacrifice (1992:119).

### God U



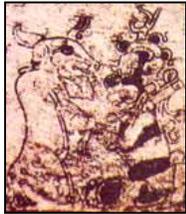
God U appears twice in the first twenty three pages, in Almanacs 8 and 43. In both cases, the prognostication is negative. Thompson refers to this deity as "Zimmermann's God U". In 1904, Forstemann identified God U as closely related to God K, K'awil. Taube does not mention this deity in his 1992 study of gods of the Yucatan.

### God M



God M occurs only once in the first twenty three pages (Almanac 23). The associated prognostication is positive. In the Dresden, he is distinguished by black striping and an extended lower lip. His name glyph is a U-shaped sign. Taube suggests his strange character may place his origins out of the Maya region, deriving instead from Yacatecuhtli, the Central Mexican God of Merchants (1992:89). Others suggest God M is Ek Chuah, Post-Classic Yucatek Merchant God (Schellhas 1904:35-36). God L, also associated with mercantilism, is closely related to God M (Coe 1973:14). Both deities are linked to the Muan bird. Noting God M's lack of Classic equivalents, Taube suggests that God L is the Classic period predecessor (1992:92).

### Wuk Zip



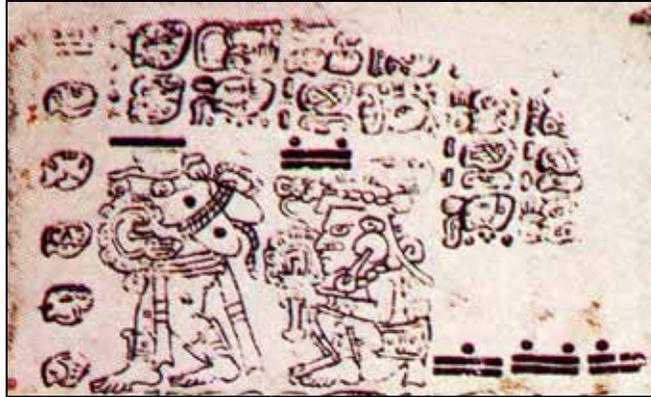
Wuk Zip, a Yucatek god of hunting, appears only once in the first twenty three pages, within Almanac 31. The associated prognostication is negative. Like God M, Wuk Zip's body (in the Dresden) has black stripes. Rather than being a deity who aids the hunter, Wuk Zip protects the deer, often by beguiling hunters (Thompson 1970:308-309). With that understanding of his role, it makes sense that Almanac 31 shows him grasping the leg of a deer. The Paris Codex, page 10, displays Wuk Zip with a deer headdress. The negative prognostication associated with Wuk Zip may suggest he represents bad luck for hunters.

### The Animals of the First Twenty Three Pages

The following is not intended to be an overall discussion of the mythological significance of the animals but rather a simple tally of associated positive and negative prognostications.

First, the negatively associated animals. The dog, *tz'ul*, appears in 4 prognostications, 1 positive and 3 negative. The vulture, *kuch*, occurs in 6, 1 positive, 5 negative. The deer, *k'an chinal winik* (?), appears twice, both in negative contexts. The armadillo, mentioned only once, is negatively associated. Finally, the macaw, *moo*, also appearing only once, is found in negative context. Next, the positively associated animals. The yaxun bird appears twice, both times in positive prognostications. The other three positively associated animals, the queztl (*k'uk'*), the turkey (*kutz'*), and the monkey (*ma'ax*) appear only once each.

Figure 3. Almanac 3



**Day Computations:** 5x52=260 day cycle

<u>T'ol 5</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>
13 KAWAK	+ 5 = 5 K'an	+ 12 = 4 Kib	+ 11 = 2 Manik'	+ 12 = 1 Kawak + 12 =
13 CHUWEN	+ 5 = 5 Kib	+ 12 = 4 Lamat	+ 11 = 2 Kawak	+ 12 = 1 Chuwen + 12 =
13 AK'BAL	+ 5 = 5 Lamat	+ 12 = 4 Ahaw	+ 11 = 2 Chuwen	+ 12 = 1 Ak'bal + 12 =
13 MEN	+ 5 = 5 Ahaw	+ 12 = 4 Eb	+ 11 = 2 Ak'bal	+ 12 = 1 Men + 12 =
13 MANIK'	+ 5 = 5 Eb	+ 12 = 4 K'an	+ 11 = 2 Men	+ 12 = 1 Manik' + 12 =
13 Kawak -- complete cycle				

**General Commentary**

T'ols 2, 3, and 4 of this almanac contain a glyph currently accepted as reading *yatan*. *Atan* is defined in the Cordemex as “wife” (1980:18). The *y-* prefix here functions as a possessive complement making the translation “his wife”. Even before the acceptance of phonetics, this glyph was interpreted as “marriage” or “coition”. Thompson disagreed with that reading, suggesting instead that the glyph be translated “celestial crossing” (1972:49). While Thompson’s reading enjoys little support today, he was correct to point out that the variety of contexts in which it appears suggest its meanings are multiple. *Yatan* appears in 12 almanacs of the first twenty three pages, most in association with the Moon Goddess. Bob Wald has recently suggested an alternative translation. He reads *yatan* as “his/her payment, offering” (personal communication 1995). The Cordemex supports his alternative reading (1980:18). In Almanac 3, “his offering” makes better sense. There are other almanacs, especially in the Moon Goddess Pages, in which “his wife” seems more appropriate.

**T'ol 1** days: 5..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil*.

Image: A headless body stands crouched holding a fan. The name glyph above and spotted body suggest the figure is Hunahpu, one of the Popol Vuh hero twins.

Commentary: The first glyph of the passage is *ch'ak ba*, an action verb suggested to translate "he was beheaded". The name glyph at block A2 has been determined to be the name of Hun Ahaw (Taube 992:116). The text and associated image may refer to the passage in the Popol Vuh in which Hunahpu was beheaded before a ballgame against the Lords of Xibalba. The glyph in block B1 reads *tuch*. The Cordemex translates *tuch* as "navel", a reading that makes little sense in this context. This same glyph appears in Almanac 37 with the prefix *ah*, meaning "he/her of". Unfortunately, the name glyph of the associated deity in Almanac 37 is destroyed.

**T'ol 2** days: 4..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks C1-D2, outcome is positive, *k'aa wah ha'*.

Image: The Maize God sits holding a fan.

Commentary: There may be a connection between this t'ol's image and T'ol 1's image. The Maize God, father of the hero twins, was also beheaded in the ballcourt at Xibalba. His head was reconnected to his body by his sons. The experience began his transformation into the Maize God.

**T'ol 3** days: 2..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks E1-E4, the outcome is negative, *an kimil*.

Image: None.

Commentary: The actor of the prognostication statement is the Moon Goddess (glyph block E2). The action verb glyph has been destroyed (glyph block E1).

**T'ol 4** days: 1..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks F1-F4, the outcome is unclear due to lack of text.

Image: None.

Commentary: As in T'ol 3, the Moon Goddess is the actor and the action verb is destroyed.

**T'ol 5** days: 13..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks G1-G4, totally destroyed.

Image: None.

Commentary: Located at the edge of the page, this t'ol has been completely worn away.

ALMANAC 4, PAGE 2b

Figure 4. Almanac 4



**Day Computations:**  $5 \times 52 = 260$  day cycle

T'ol 2

T'ol 1

11 OK + 34 = 6 K'an + 18 =

11 IK' + 34 = 6 Kib + 18 =

11 IX + 34 = 6 Lamat + 18 =

11 KIMI + 34 = 6 Ahaw + 18 =

11 ETZ'NAB + 34 = 6 Eb + 18 =

11 Ok -- complete cycle

**General Commentary**

Both t'ols of Almanac 4 begin with the same glyph, an action verb translated *u chuy*, "his/ her weaving" (Barrera 1980:118). First correctly identified by Lounsbury in 1976, the associated images of figures holding textiles correlate well with his translation.

**T'ol 1** days: 6..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le*.

Image: Goddess O sits holding a net. God H sits across from her holding a sowing needle.

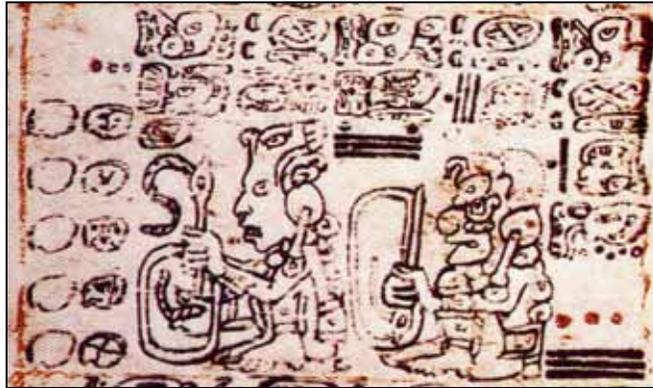
**T'ol 2** days: 11..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil*.

Image: The Death God sits weaving a net.

Commentary: *Yatan*, probably meaning "his offering" (Wald 1995: personal communication) in this context, appears in glyph block D1.

Figure 5. Almanac 5



**Day Computations:** 5x52=260 day cycle

<u>T'ol 3</u>	<u>T'ol 1</u>	<u>T'ol 2</u>
3 OK	+ 20 = 10 Ok	+ 17 = 1 Manik' + 15 =
3 IK'	+ 20 = 10 Ik'	+ 17 = 1 Kawak + 15 =
3 IX	+ 20 = 10 Ix	+ 17 = 1 Chuwen + 15 =
3 KIMI	+ 20 = 10 Kimi	+ 17 = 1 Ak'bal + 15 =
3 ETZ'NAB	+ 20 = 10 Etz'nab	+ 17 = 1 Men + 15 =
3 Ok -- complete cycle		

**General Commentary**

Each of the three t'ols begin with the same two glyphs, *u chuy* and *yatan*, meaning “he/she wove it” and “his/her offering” respectively. Refer to the commentaries of Almanacs 3 and 4 for the references of those translations.

**T'ol 1** days: 10..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks A1-B2, outcome is positive, *k'aa wah ha'*.

Image: The Maize God sits weaving a net.

**T'ol 2** days: 1..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks C1-D2, outcome is positive(?), *wak lahun k'in*.

Images: Itzamna sits weaving a net.

**T'ol 3** days: 3..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks E1-E4, outcome is negative, *u an kimil*.

Image: None.

Commentary: The deity named in block E3 is *wuk ? yu*.

ALMANAC 6, PAGE 2d

Figure 6. Almanac 6



**Day Computations:**  $5 \times 52 = 260$  day cycle

T'ol 2

T'ol 1

13 LAMAT + 28 = 2 Kib + 24 =

13 AHAW + 28 = 2 Lamat + 24 =

13 EB + 28 = 2 Ahaw + 24 =

13 K'AN + 28 = 2 Eb + 24 =

13 KIB + 28 = 2 K'an + 24 =

13 Lamat -- complete cycle

**General Commentary**

Image and text correlate well in Almanac 6. Both t'ols include a glyph which clearly reads *u pik*, "her/his skirt" (Barrera 1980:653). T'ol 1 begins with a glyph reading *u k'am* (glyph block A1). Though no translation for *k'am* has been widely accepted the oldest verb entry in the Cordemex reads "to serve the house of a noble" (Barrera 1980:371). The correlating image shows a folded skirt being held out by the Moon Goddess. T'ol 2's glyptic equivalent differs slightly in spelling to read *u k'al*, "he tied" (Barrera 1980:367). Strongly supporting the *k'al* reading, the associated image portrays Death God A in the process of tying the straps of a skirt.

**T'ol 1** days: 2..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks A1-B2, outcome is positive, *ya mu la na?*

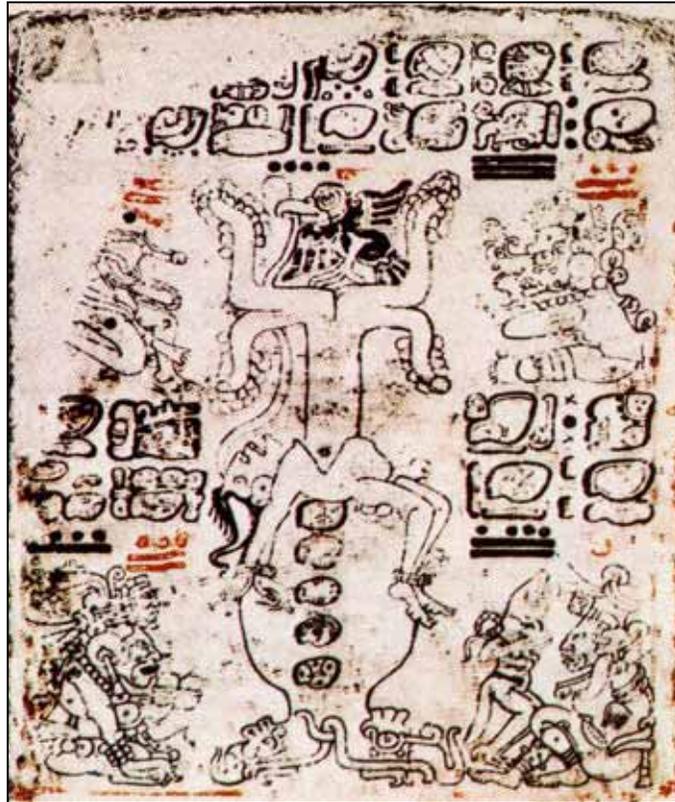
Image: The Moon Goddess holds up a textile object.

**T'ol 2** days: 13..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil*.

Image: The Death God (God A) stands holding a skirt.

Figure 7. Almanac 7



**Day Computations:** 5x52=260 day cycle

<u>T'ol 5</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>	
1 AHAW	+ 4 = 5 K'an	+ 8 = 13 Eb	+ 11 = 11 Ak'bal	+ 15 = 13 Etz'nab	+ 14 =
1 EB	+ 4 = 5 Kib	+ 8 = 13 K'an	+ 11 = 11 Men	+ 15 = 13 Ok	+ 14 =
1 K'AN	+ 4 = 5 Lamat	+ 8 = 13 Kib	+ 11 = 11 Manik'	+ 15 = 13 Ik'	+ 14 =
1 KIB	+ 4 = 5 Ahaw	+ 8 = 13 Lamat	+ 11 = 11 Kawak	+ 15 = 13 Ix	+ 14 =
1 LAMAT	+ 4 = 5 Eb	+ 8 = 13 Ahaw	+ 11 = 11 Chuwen	+ 15 = 13 Kimi	+ 14 =
1 Ahaw -- complete cycle					

**General Commentary**

The glyph *yatan* appears in each of the t'ol passages of Almanac 7. Again, Bob Wald's reading of "his/her payment, offering" fits the context better than "his wife".

**T'ol 1** days: 5..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks C1-D2, outcome is negative, *u muk*.

Image: Bound victim with a tree sprouting from a split in his stomach. A vulture sits atop the tree with the victim's eye in its beak.

Commentary: The bird image may imply a connection to Vucub Caquix, false Sun of the third creation. The Popol Vuh speaks of him perched atop a tree (Tedlock 1985:360).

**T'ol 2** days: 13..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks A3-B4, outcome is positive, *k'aa ha' wah*.

Image: The Maize God sits holding a bowl of offerings.

Commentary: The subject of the passage reads *sak tz'a ahaw*.

**T'ol 3** days: 11..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks A1-B2, outcome is negative, *kimil*.

Image: Partially destroyed, possibly the Death God.

Commentary: All but the outcome glyph (glyph block B2) are destroyed.

**T'ol 4** days: 13..Etz'nab, Ok, Ik', Ix, Kimi

Prognostication: Glyph blocks E1-F2, outcome positive, *ox ok wah*.

Image: K'awil sits, arms crossed.

Commentary: The action verb of the passage reads *u bak*, meaning "his prisoner".

**T'ol 5** days: 1..Ahaw, Eb, K'an, Kib, Lamat

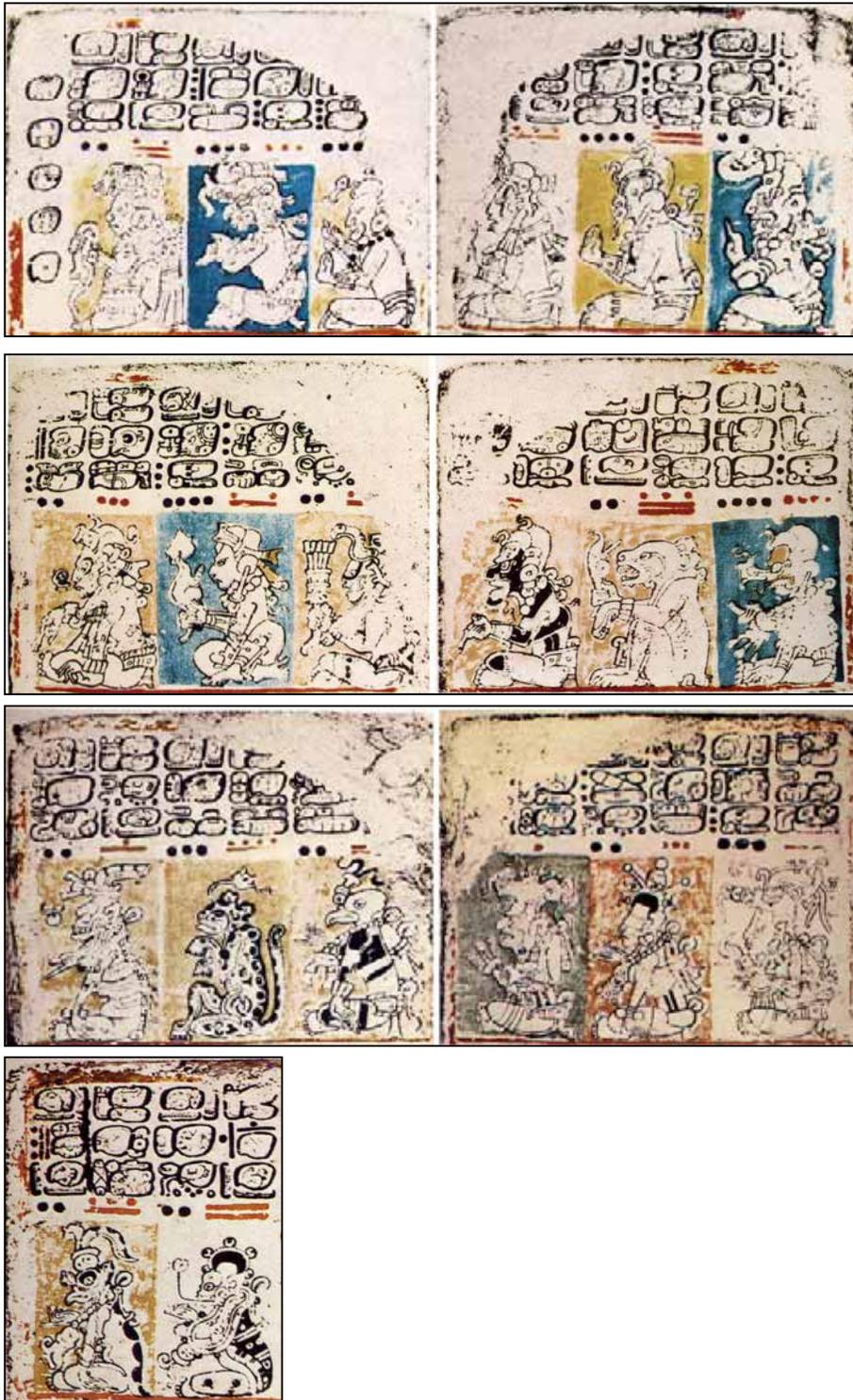
Prognostication: Glyph blocks E3-F4, outcome is negative, *u muk*.

Image: God H sits, arms bound behind his back. A dog stands facing him, also bound.

Commentary: The subject of the passage (glyph block F3) has been identified as Xbalanque (Taube 1992:63). His bound condition is recorded in the first glyph of the associated passage (E3) as *chukah*, "was captured" (Barrera 1980:111).

ALMANAC 8, PAGES 4a -10a

Figure 8. Almanac 8



**Day Computations: 5x52=260 day cycle**

<u>T'ol 20</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>
10 IMIX	+ 2 = 12 Ak'bal	+ 4 = 3 Manik'	+ 3 = 6 Ok	+ 2 = 8 Eb + 4 =
10 BEN	+ 2 = 12 Men	+ 4 = 3 Kawak	+ 3 = 6 Ik'	+ 2 = 8 K'an + 4 =
10 CHIKCHAN	+ 2 = 12 Manik'	+ 4 = 3 Chuwen	+ 3 = 6 Ix	+ 2 = 8 Kib + 4 =
10 KABAN	+ 2 = 12 Kawak	+ 4 = 3 Ak'bal	+ 3 = 6 Kimi	+ 2 = 8 Lamat + 4 =
10 MULUK	+ 2 = 12 Chuwen	+ 4 = 3 Men	+ 3 = 6 Etz'nab	+ 2 = 8 Ahaw + 4 =

10 Imix -- complete cycle

<u>T'ol 5</u>	<u>T'ol 6</u>	<u>T'ol 7</u>	<u>T'ol 8</u>	<u>T'ol 9</u>	<u>T'ol 10</u>
12 Kib	+ 2 = 1 Etz'nab	+ 2 = 3 Ahaw	+ 4 = 7 K'an	+ 2 = 9 Kimi	+ 2 = 11 Lamat + 2 =
12 Lamat	+ 2 = 1 Ok	+ 2 = 3 Eb	+ 4 = 7 Kib	+ 2 = 9 Etz'nab	+ 2 = 11 Ahaw + 2 =
12 Ahaw	+ 2 = 1 Ik'	+ 2 = 3 K'an	+ 4 = 7 Lamat	+ 2 = 9 Ok	+ 2 = 11 Eb + 2 =
12 Eb	+ 2 = 1 Ix	+ 2 = 3 Kib	+ 4 = 7 Ahaw	+ 2 = 9 Ik'	+ 2 = 11 K'an + 2 =
12 K'an	+ 2 = 1 Kimi	+ 2 = 3 Lamat	+ 4 = 7 Eb	+ 2 = 9 Ix	+ 2 = 11 Kib + 2 =

<u>T'ol 11</u>	<u>T'ol 12</u>	<u>T'ol 13</u>	<u>T'ol 14</u>	<u>T'ol 15</u>	<u>T'ol 16</u>
13 Ok	+ 4 = 4 Ix	+ 2 = 6 Kib	+ 3 = 9 Kawak	+ 2 = 11 Imix	+ 3 = 1 K'an + 2 =
13 Ik'	+ 4 = 4 Kimi	+ 2 = 6 Lamat	+ 3 = 9 Chuwen	+ 2 = 11 Ben	+ 3 = 1 Kib + 2 =
13 Ix	+ 4 = 4 Etz'nab	+ 2 = 6 Ahaw	+ 3 = 9 Ak'bal	+ 2 = 11 Chikchan	+ 3 = 1 Lamat + 2 =
13 Kimi	+ 4 = 4 Ok	+ 2 = 6 Eb	+ 3 = 9 Men	+ 2 = 11 Kaban	+ 3 = 1 Ahaw + 2 =
13 Etz'nab	+ 4 = 4 Ik'	+ 2 = 6 K'an	+ 3 = 9 Manik'	+ 2 = 11 Muluk	+ 3 = 1 Eb + 2 =

<u>T'ol 17</u>	<u>T'ol 18</u>	<u>T'ol 19</u>
3 Kimi	+ 3 = 6 Muluk	+ 2 = 8 Chuwen + 2 =
3 Etz'nab	+ 3 = 6 Imix	+ 2 = 8 Ak'bal + 2 =
3 Ok	+ 3 = 6 Ben	+ 2 = 8 Men + 2 =
3 Ik'	+ 3 = 6 Chikchan	+ 2 = 8 Manik' + 2 =
3 Ix	+ 3 = 6 Kaban	+ 2 = 8 Kawak + 2 =

**General Commentary**

Almanac 8 is the longest of the 52 prognostication almanacs. Due to the horizontal length of the almanac, Figure 6. has been arranged in four columns. In the codex, Almanac 8 is linear, containing exactly twenty t'ols and covering the top row of pages 4 -10. Instead of the usual four, each t'ol contains six glyph blocks. The first two glyph blocks of each t'ol are identical. The first of the two repeating glyphs has yet to be fully deciphered. The

Etz'nab-eared rabbit head (T759) has not been assigned a solid phonetic value. The post- and sub-fix of the glyph are *ha* and *ka* respectively. A reading has been offered for the second repeating glyph. *Tu chich* translates as “his word” or “his speech” (Barrera 1980:93). In this context, “his word” may refer to the prognostication being offered.

**T'ol 1** days: 12..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks A1-B3, outcome is negative, *matzil* and *u muk*.

Image: Schellhas God P sits holding a snake.

Commentary: The deity named in the passage is not God P, as in the associated image, but rather God H, his name repeated twice at glyph blocks A2 and B2. In addition, this is the only appearance of God P in the Dresden. The context here implies God P may in fact be an aspect of God H. Taube believes God P to be Quetzalcoatl (1992:61).

**T'ol 2** days: 3..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks C1-D3, outcome is positive, *bolon tz'ak ahaw, ox wil*.

Image: Chak sits cross-armed.

Commentary: A third positive prognostication glyph, at C3, remains undeciphered.

**T'ol 3** days: 6..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks E1-F3, outcome is uncertain.

Image: God N sits.

Commentary: All but glyph block E3 of the passage is destroyed. E3 is the name of God N, *K'an Pawatun*.

**T'ol 4** days: 8..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: G1-H3, outcome is negative, *u muk*.

Image: God Q sits.

Commentary: The majority of the passage is destroyed, only one outcome glyph, H3, remains.

**T'ol 5** days: 12..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks I1-J3, outcome is positive, *ox wil, tz'ak ahaw, and yutzil*.

Image: God C sits.

**T'ol 6** days: 1 Etz'nab, Ok, Ik', Ix, Kimi

Prognostication: Glyph blocks K1-L3, outcome is negative, *k'ak te tun* and *nuk men*.

Image: The Sun God sits arms crossed.

Commentary: Third outcome glyph, L2, is destroyed but begins with *wuk*.

**T'ol 7** days: 3.. Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks M1-N3, outcome is positive, *ox ?* and *tz'ak ahaw*.

Image: God R sits.

**T'ol 8** days: 7..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks O1-P3, outcome is positive, *ox wil* and *k'aa ha' wah*.

Image: God H sits holding a plant stalk.

**T'ol 9** days: 9..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks Q1-R3, outcome is negative, *an kimil*.

Image: The Death God, God A', sits.

Commentary: All glyphs but one outcome glyph, Q3, are destroyed.

**T'ol 10** days: 11..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks S1-T3, outcome is positive, *ahawliil*.

Image: God L sits.

Commentary: Passage is mainly destroyed.

**T'ol 11** days: 13..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks U1-V3, outcome is negative, *nuk men*, *u muk*, and *matzil*.

Image: A dog sits, holding a piece of vegetation.

Commentary: Glyph block U2 reads *tz'ul*, the yukatek word for dog.

**T'ol 12** days: 4..Ix, Kimi, Etz'nab, Ok, Ik'

Prognostication: Glyph blocks W1-X3, outcome is positive, *ahawliil* and *ox wil*.

Image: K'awil sits wearing a jeweled necklace.

Commentary: Glyph block X2 is the name glyph of Zimmermann God U. The phonetic reading *kel*, meaning "youth", has been suggested by Grube. Its meaning in this context is not understood.

**T'ol 13** days: 6..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Y1-Z3, outcome is negative, *an kimil*, *lob*, and *u muk*.

Image: The Death God (God A) sits.

**T'ol 14** days: 9..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks AA1-BB3, outcome is positive, *yutzil*, *k'aa ha' wah*, and *ma ? le*.

Image: Chak Bolay sits.

**T'ol 15** days: 11..Imix, Ben, Chikchan, Kaban, Muluk

Prognostication: Glyph blocks CC1-DD3, outcome is negative, *nuk men*.

Image: A vulture headed being sits wearing a jeweled necklace.

Commentary: Most of the passage is destroyed. Glyph block CC2 shows the name of the vulture headed being.

**T'ol 16** days: 1..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks EE1-FF3, outcome is positive, *ahawliil* and *yutzil*.

Image: Itzamna sits holding jewelry.

**T'ol 17** days: 3..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks GG1-HH3, outcome is negative, *lob, an kimil*, and *nuk men*.

Image: God A'' sits wearing a jeweled necklace.

Commentary: The God A'' name glyph at GG2 has not been fully deciphered. Its pre- and sub-fix are *ox* and *na* respectively.

**T'ol 18** days: 6..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks II1-JJ3, outcome is positive, *k'aa ha' wah, ox wil, yo k'in*.

Image: The Maize God sits.

**T'ol 19** days: 8..Chuwen, Ak'bal, Men, Manik', Kawak

Prognostication: Glyph blocks KK1-LL3, outcome is negative, *u muk* and *tok' bat(?)*.

Image: Deity with an owl face sits. Its headdress displays a death symbol.

Commentary: The name, located at KK2 and LL2, reads *oxlahun kanal kuy*, meaning "thirteen sky owl".

**T'ol 20** days: 10..Imix, Ben, Chikchan, Kaban, Muluk

Prognostication: Glyph blocks MM1-NN3, outcome is negative, *an kimil* and *u muk*.

Image: The Death God (God A) sits wearing a death symbol necklace.

Figure 9. Almanac 9



**Day Computations:** 5x52=260 day cycle

<u>T'ol 5</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>
11 LAMAT + 12 = 10 Ahaw + 8 = 5 Lamat + 12 = 4 Ahaw + 8 = 12 Lamat + 12 =				
11 AHAW + 12 = 10 Eb + 8 = 5 Ahaw + 12 = 4 Eb + 8 = 12 Ahaw + 12 =				
11 EB + 12 = 10 K'an + 8 = 5 Eb + 12 = 4 K'an + 8 = 12 Eb + 12 =				
11 K'AN + 12 = 10 Kib + 8 = 5 K'an + 12 = 4 Kib + 8 = 12 K'an + 12 =				
11 KIB + 12 = 10 Lamat + 8 = 5 Kib + 12 = 4 Lamat + 8 = 12 Kib + 12 =				
11 Lamat -- complete cycle				

**T'ol 1** days: 10..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahawliil*.

Image: Itzamna sits.

Commentary: All glyphs but the outcome glyph at B1 are destroyed.

**T'ol 2** days: 5..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks C1-D2, outcome is negative, *u muk*.

Image: Oxlahun Kanal Kuy sits.

Commentary: All glyphs but an outcome glyph are destroyed. The name glyph of the passage is the same as in Almanac 8 above the owl being, *oxlahun kanal kuy*.

**T'ol 3** days: 4..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks E1-F2, outcome is positive, *ox wil*.

Image: God H sits wearing a bird headdress.

Commentary: Undeciphered glyph at E2, *tu ta li(?)*. "Pumpkin seeds" has been suggested (Schele et al.:1994).

**T'ol 4** days: 12..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks G1-H2, outcome is negative, *an kimil* and *u muk*.

Image: The Death God sits.

Commentary: Undeciphered glyph from T'ol 3 is included in the verb glyph at G1.

**T'ol 5** days: 11..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks I1-J2, outcome is positive, *k'aa ha' wah* and *ahawlil*.

Image: The Maize God sits holding a bowl of pods.

Commentary: Glyph I1 is the verb of the passage and is a repeat of the undeciphered glyph at G1.

The drawing is more visible here and may read *och tu ku ba*. The translation is still uncertain.

Figure 10. Almanac 10



**Day Computations:** 2 separate cycles of  $5 \times 52 = 260$  day cycles

cycle 1:

<u>T'ol 2</u>	<u>T'ol 1</u>
8 AHAW + 27 = 9 Manik'	+ 25 = 8 OK
8 EB + 27 = 9 Kawak	+ 25 =
8 K'AN + 27 = 9 Chuwen	+ 25 =
8 KIB + 27 = 9 Ak'bal	+ 25 = 8 KIMI
8 LAMAT + 27 = 9 Men	+ 25 =
8 Ahaw -- complete cycle	

cycle 2:

<u>T'ol 2</u>	<u>T'ol 1</u>
+ 27 = 9 Kaban	+ 25 =
8 IK' + 27 = 9 Muluk	+ 25 =
8 IX + 27 = 9 Imix	+ 25 =
+ 27 = 9 Ben	+ 25 =
8 ETZ'NAB + 27 = 9 Chikchan	+ 25 =
8 Ok -- complete cycle	

**T'ol 1** days: 9..Manik', Kawak, Chuwen, Ak'bal, Men, Kaban, Muluk, Imix, Ben, Chikchan

Prognostication: Glyph blocks A1-B2, outcome is positive, *ox wil*.

Image: K'awil sits holding a bowl of small round offerings, probably cacao.

Commentary: The name of the Maize God is included in the passage, possibly the recipient of K'awil's action. K'awil's name is partially destroyed but still visible in glyph block B1. Glyph block A1 reads *ka ka wa*, cacao.

**T'ol 2** days: 8..Ahaw, Eb, K'an, Kib, Lamat, Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks C1-C4, outcome is negative, *an kimil*.

Image: None.

Commentary: The first two glyphs of the passage are destroyed. The subject of the passage, located in glyph block C3, is *Oxlahun Kanal*, the owl being.

Figure 11. Almanac 11



**Day Computations:** 5x52=260 day cycle

<u>T'ol 2</u>		<u>T'ol 1</u>	
8 IMIX	+ 26 =	8 Manik'	+ 26 =
8 BEN	+ 26 =	8 Kawak	+ 26 =
8 CHIKCHAN	+ 26 =	8 Chuwen	+ 26 =
8 KABAN	+ 26 =	8 Ak'bal	+ 26 =
8 MULUK	+ 26 =	8 Men	+ 26 =
8 Imix -- complete cycle			

**T'ol 1** days: 8..Imix, Ben, Chikchan, Kaban, Muluk

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le* and *ahaw lil*.

Image: K'awil sits holding a bowl of cacao pods.

**T'ol 2** days: 8..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks C1-D2, outcome is negative, *lobil* and *an kimil*.

Image: The Death God (God A) sits holding a bowl of cacao pods.

Commentary: Glyph block C1 reads *och ka ka wa*. The root of the word seems to be *kakaw*, which correlates well with the objects the deities hold.

Figure 12. Almanac 12



**Day Computations:**  $5 \times 52 = 260$  day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>
8 AHAW + 13 = 8 Ben	+ 13 = 8 Kimi	+ 13 = 8 Kawak	+ 13 =
8 EB + 13 = 8 Chikchan	+ 13 = 8 Etz'nab	+ 13 = 8 Chuwen	+ 13 =
8 K'AN + 13 = 8 Kaban	+ 13 = 8 Ok	+ 13 = 8 Ak'bal	+ 13 =
8 KIB + 13 = 8 Muluk	+ 13 = 8 Ik'	+ 13 = 8 Men	+ 13 =
8 LAMAT + 13 = 8 Imix	+ 13 = 8 Ix	+ 13 = 8 Manik'	+ 13 =
8 Ahaw -- complete cycle			

**General Commentary**

The final two days of the visible day column, Kib and Lamat, are written in reverse order. Thompson referred to this almanac as a chant to the four directions (1972:37). The T'ol 1 begins with the glyph for south, T'ol 2 begins with the glyph for north, and the last two t'ol texts are mainly destroyed. Presumably, they contained the glyphs for east and west. Only the direction and the named deities change from t'ol text to t'ol text. The almanac uses the sacred number 13 to compute the day names. Interestingly, the arrangement allows all twenty day names (with a coefficient of 8) to appear in the cycle. An entire 260 day period is covered marking each of the "8" days.

**T'ol 1** days: 8..Ben, Chikchan, Kaban, Muluk, Imix

Prognostication: Glyph blocks A1-B2, outcome unclear.

Image: The Maize God sits.

Commentary: The passage connects the Maize God to the direction south. Glyph block B1 reads *u men*, Thompson was the first to suggest the translation “his occupation” (1972:37). That reading has not been over turned. Presumably, the *u men* glyphs continue through the next three t'ols.

**T'ol 2** days: 8..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks C1-D2, outcome unclear.

Image: God H sits.

Commentary: The passage connects God H to the direction north.

**T'ol 3** days: 8..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph E1-F2, outcome unclear.

Image: The Death God (God A) sits.

Commentary: The text is largely destroyed. Directional association is uncertain.

**T'ol 4** days: 8..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks G1-H1, outcome unclear.

Image: Itzamna sits, *k'an* or *k'in* symbols decorate his body.

Commentary: The text is largely destroyed. Directional association is uncertain.

Figure 13. Almanac 13



**Day Computations:** 5x52=260 day cycle

<u>T'ol 2</u>		<u>T'ol 1</u>	
5 AHAW	+ 34 = 13 Ix		+ 18 =
5 EB	+ 34 = 13 Kimi		+ 18 =
5 K'AN	+ 34 = 13 Etz'nab		+ 18 =
5 KIB	+ 34 = 13 Ok		+ 18 =
5 LAMAT	+ 34 = 13 Ik'		+ 18 =
5 Ahaw	-- complete cycle		

### General Commentary

Thompson believed this almanac and Almanac 23, located directly below it, marked the end of chapter one of the Dresden Codex (1972:46). He connected the images of descending gods to images in the Madrid Codex (109a) of anthropomorphized bee deities and to the diving bee gods of Quintana Roo. He also noted the lack of standard augural glyphs in the two t'ols of Almanac 13. Each t'ol begins with the same two glyphs. With help from Almanac 23, the first glyph may be reconstructed as *u pak'ah*, translating "he plants" (Barrera 1980:624). Thompson identified this first glyph as *u.715, lah*, a glyph connected to beekeeping in the Madrid Codex. Interestingly, one of *pak'ah*'s sixteen definitions listed in the Cordemex is "he beekeeps". The second repeating glyph has been read *tzen*, meaning "food, substance" (Bricker and Bricker :1992). *Tzen* also appears in the Venus Pages of the Dresden, repeating across all five pages. As for the prognostication outcomes, the presence of the benevolent Itzamna vs. the menacing presence of the Death God seem to be serving as the prognostication outcome metaphors.

**T'ol 1** days: 13..Ix, Kimi, Etz'nab, Ok, Ik'

Prognostication: Glyph blocks A1-B2, outcome unclear, probably positive.

Image: Itzamna descends, cacao pods sprouting from his body.

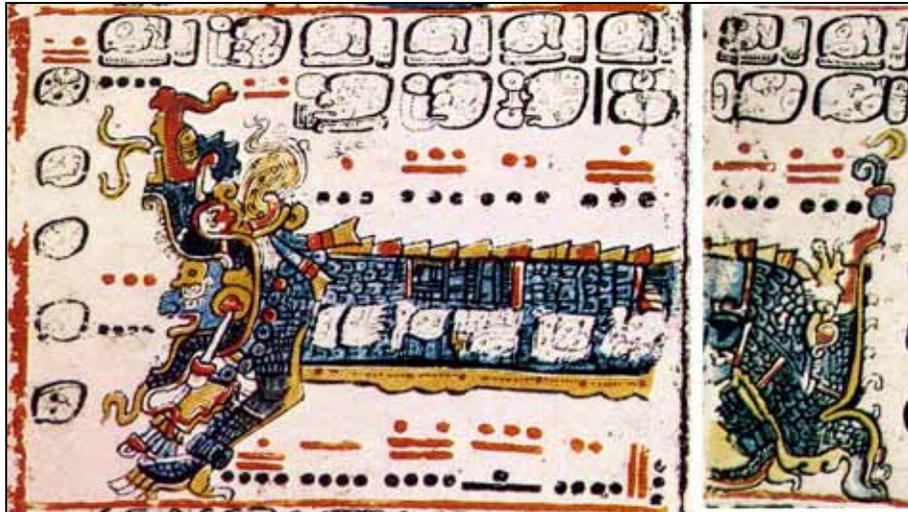
**T'ol 2** days: 5..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks C1-D2, outcome unclear, probably negative.

Image: The Death God (God A) descends, cacao pods sprouting from his body.

ALMANAC 14, PAGES 4b-5b

Figure 14. Almanac 14



**Day Computations:** 5x52=260 day cycle

<u>T'ol 14</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>	
12 IX	+ 4 = 3 Etz'nab	+ 4 = 7 Ik'	+ 4 = 11 Kimi	+ 3 = 1 Muluk	+ 4 =
12 KIMI	+ 4 = 3 Ok	+ 4 = 7 Ix	+ 4 = 11 Etz'nab	+ 3 = 1 Imix	+ 4 =
12 ETZ'NAB	+ 4 = 3 Ik'	+ 4 = 7 Kimi	+ 4 = 11 Ok	+ 3 = 1 Ben	+ 4 =
12 OK	+ 4 = 3 Ix	+ 4 = 7 Etz'nab	+ 4 = 11 Ik'	+ 3 = 1 Chikchan	+ 4 =
12 IK'	+ 4 = 3 Kimi	+ 4 = 7 Ok	+ 4 = 11 Ix	+ 3 = 1 Kaban	+ 4 =
12 Ix -- complete cycle					

<u>T'ol 5</u>	<u>T'ol 6</u>	<u>T'ol 7</u>	<u>T'ol 8</u>	<u>T'ol 9</u>	<u>T'ol 10</u>	
5 Ben	+ 3 = 8 Kib	+ 4 = 12 Ahaw	+ 3 = 2 Ak'bal	+ 6 = 8 Muluk	+ 3 = 11 Eb	+ 4 =
5 Chikchan	+ 3 = 8 Lamat	+ 4 = 12 Eb	+ 3 = 2 Men	+ 6 = 8 Imix	+ 3 = 11 K'an	+ 4 =
5 Kaban	+ 3 = 8 Ahaw	+ 4 = 12 K'an	+ 3 = 2 Manik'	+ 6 = 8 Ben	+ 3 = 11 Kib	+ 4 =
5 Muluk	+ 3 = 8 Eb	+ 4 = 12 Kib	+ 3 = 2 Kawak	+ 6 = 8 Chikchan	+ 3 = 11 Lamat	+ 4 =
5 Imix	+ 3 = 8 K'an	+ 4 = 12 Lamat	+ 3 = 2 Chuwen	+ 6 = 8 Kaban	+ 3 = 11 Ahaw	+ 4 =

<u>T'ol 11</u>	<u>T'ol 12</u>	<u>T'ol 13</u>
2 Kib + 4 = 6 Ahaw	+ 3 = 9 Ak'bal	+ 3 =
2 Lamat + 4 = 6 Eb	+ 3 = 9 Men	+ 3 =
2 Ahaw + 4 = 6 K'an	+ 3 = 9 Manik'	+ 3 =
2 Eb + 4 = 6 Kib	+ 3 = 9 Kawak	+ 3 =
2 K'an + 4 = 6 Lamat	+ 3 = 9 Chuwen	+ 3 =

### General Commentary

All prognostications in this almanac are negative. Thompson decided not give a t'ol by t'ol commentary. The numbers are offset from the glyphs in the monster's body, making correlation difficult. Toward the better part of conservatism, Thompson named the gods in the top row and the augural glyphs on the side of the monster without t'ol associations (1972:37).

A possible solution to the t'ol/augury correlation is proposed here. The reading order of the day cycles through the almanac suggests pairs of t'ols centered around the body of the monster. It is therefore proposed that pairs of t'ols may share prognostications. The glyphs in the upper row record only god names, the lower glyphs only auguries. Together they form complete prognostication passages. Viewed in this way, T'ols 1 and 2 are grouped, 3 and 4, 5 and 6, etc.. through T'ol 14. A possible flaw in this arrangement lies in the fact that T'ols 1 and 2 end up with no apparent augural glyph. As these two t'ols straddle the head of the monster, it is possible that the head is the implied outcome of the prognostication they share. Each t'ol starts with the same glyph, a rabbit head with an *Etz'nab* or *tok'* ear. It is known to be the subject of the passages but remains undeciphered.

**T'ol 1** days: 3..Etz'nab, Ok, Ik', Ix, Kimi

**T'ol 2** days: 7..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks A1-B1, outcome unclear, very likely negative.

Image: T'ol are placed around the head of the Cosmic Monster, Itzamna in its mouth.

Commentary: The associated deity, located at glyph block B1, is God C.

**T'ol 3** days: 11..Kimi, Etz'nab, Ok, Ik', Ix

**T'ol 4** days: 1..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks C1-C2, and A3, outcome is negative, *kimi*.

Image: None

Commentary: The deity named in the passage is Itzamna. Itzamna is also the deity portrayed emerging from the mouth of the celestial monster.

**T'ol 5** days: 5..Ben, Chikchan, Kaban, Muluk, Imix

**T'ol 6** days: 8..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks D1-D2 and B2, outcome is negative, *an kimil*.

Image: None.

Commentary: The deity named is God C.

**T'ol 7** days: 12..Ahaw, Eb, K'an, Kib, Lamat

**T'ol 8** days: 2..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks E1-E2 and C3, outcome is negative, *nuk men*.

Image: None.

Commentary: The deity named is God H.

**T'ol 9** days: 8..Muluk, Imix, Ben, Chikchan, Kaban

**T'ol 10** days: 11..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks F1-F2 and D3, outcome is negative, *u muk*.

Image: None.

Commentary: The deity named is God N, Ho Pawatun.

**T'ol 11** days: 2..Kib, Lamat, Ahaw, Eb, K'an

**T'ol 12** days: 6..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks G1-G2 and E3, outcome is negative, *lob*.

Image: None.

Commentary: The deity named is the Death God.

**T'ol 13** days: 9..Ak'bal, Men, Manik', Kawak, Chuwen

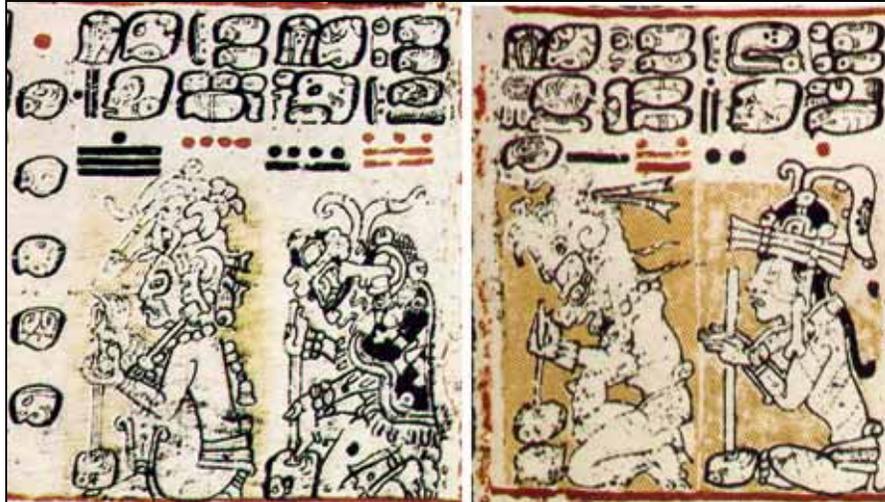
**T'ol 14** days: 12..Ix, Kimi, Etz'nab, Ok, Ik'

Prognostication: Glyph blocks H1-H2 and F3, outcome is unclear, *kawak?*.

Image: None.

Commentary: The deity named is Chak. The outcome glyph is painted the same color as the celestial monster, making identification difficult.

Figure 15. Almanac 15



**Day Computations:** 5x52=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>
1 MANIK' + 16 = 4 Ak'bal	+ 9 = 13 Eb	+ 25 = 12 Kaban	+ 2 =
1 KAWAK + 16 = 4 Men	+ 9 = 13 K'an	+ 25 = 12 Muluk	+ 2 =
1 CHUWEN + 16 = 4 Manik'	+ 9 = 13 Kib	+ 25 = 12 Imix	+ 2 =
1 AK'BAL + 16 = 4 Kawak	+ 9 = 13 Lamat	+ 25 = 12 Ben	+ 2 =
1 MEN + 16 = 4 Chuwen	+ 9 = 13 Ahaw	+ 25 = 12 Chikchan	+ 2 =
1 Manik' -- complete cycle			

**General Commentary**

Each of the four t'ols in Almanac 15 start with the same two glyphs. The first glyph reads *hoch'* meaning "to drill" (Barrera 1980:218). The second glyph reads *u chich*, meaning "his word" or, suited to context, "his prognostication" (Barrera 1980:93). The glyph pertaining to drilling correlates well with the actions portrayed in the almanac. Each of the four deities portrayed are shown drilling a fire stick into a manik' hand glyph. It is interesting that 1 Manik' is the day upon which the almanac begins.

**T'ol 1** days: 4..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks A1-B2, outcome is positive, *tz'ak ahaw*.

Image: God R sits fire drilling into a Manik' hand.

**T'ol 2** days: 13..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks C1-D2, outcome is negative, *u muk*.

Image: The Death God (God A') sits fire drilling into a Manik' hand.

**T'ol 3** days: 12..Kaban, Muluk, Imix, Ben, Chikchan

Prognostication: Glyph blocks E1-F2, outcome is positive, *ahawli*.

Image: Itzamna sits fire drilling into a Manik' hand with a bird head glyph under it.

**T'ol 4** days: 1..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks G1-H2, outcome is negative, *nuk men*.

Image: God Q sits fire drilling into a Manik' hand.

Figure 16. Almanac 16



**Day Computations:** 5x52=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>
10 K'AN + 13 = 10 Kaban	+ 13 = 10 Ok	+ 13 = 10 Ak'bal	+ 13 =
10 KIB + 13 = 10 Muluk	+ 13 = 10 Ik'	+ 13 = 10 Men	+ 13 =
10 LAMAT + 13 = 10 Imix	+ 13 = 10 Ix	+ 13 = 10 Manik'	+ 13 =
10 AHAW + 13 = 10 Ben	+ 13 = 10 Kimi	+ 13 = 10 Kawak	+ 13 =
10 EB + 13 = 10 Chikchan	+ 13 = 10 Etz'nab	+ 13 = 10 Chuwen	+ 13 =
10 K'an -- complete cycle			

**General Commentary**

Each of the four t'ols of Almanac 16 begin with the same two glyphs. The first glyph is not yet fully deciphered but appears to read *tz'un*. Nikolai Grube has offered the Cordemex definition “to commence” for *tz'un* (Barrera 1980:893). Thompson, after Brinton (1885:89) and Beyer (1937:53), suggested the glyph relates to fishing practices, weakly based on the fish tail appearance of its first phonetic sign. The second repeating glyph reads *u chich*, a relatively common glyph in the prognostication almanacs meaning “his word” or “his prognostication”. Interestingly, all twenty day names (with the coefficient “10”) are represented in this almanac. If Grube’s suggestion for *tz'un* is correct, each t'ol begins with the phrase “to commence his prognostication...”.

**T'ol 1** days: 10..Kaban, Muluk, Imix, Ben, Chikchan

Prognostication: Glyph blocks A1-B2, outcome is positive, *ox wil*.

Image: The Maize God sits holding an object in front of him.

**T'ol 2** days: 10..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil*.

Image: The Death God (God A) sits, a hand up to his face.

**T'ol 3** days: 10..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph block E1-F2, outcome is positive, *ahawliil*.

Image: Itzamna sits holding an object up to his face.

**T'ol 4** days: 10..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks G1-H2, outcome is negative, *u muk*.

Image: Xbalanque, God CH, sits with an inverted bird falling in front of him.

Figure 17. Almanac 17



**Day Computations:** 5x52=260 day cycle

T'ol 2

T'ol 1

8 MANIK' + 26 = 8 Ben + 26 =

8 KAWAK + 26 = 8 Chikchan + 26 =

8 CHUWEN + 26 = 8 Kaban + 26 =

8 AK'BAL + 26 = 8 Muluk + 26 =

8 MEN + 26 = 8 Imix + 26 =

8 Manik' -- complete cycle

**General Commentary**

Each of the two t'ols of Almanac 17 begin with the same two glyphs. The first glyph reads *nuch*, which translates "to get together head to head" (Barrera 1980:581). That reading fits well with the actions depicted below it. The second repeating glyph reads *hol*. *Hol* was read by Nikolai Grube as "head" (Schele and Grube 1995:10).

Thompson was unsure of how to classify this almanac. He tentatively designated it "chant?". There are, however, augury glyphs in both t'ols. In the second t'ol, the negative deities the Death God and Oxlahun Kanal may serve as the augury outcomes.

**T'ol 1** days: 8..Ben, Chikchan, Kaban, Muluk, Imix

Prognostication: Glyph blocks A1-C2, outcome is positive, *ahawli*.

Image: Itzamna converses with an unknown older deity. Both look at the ground.

Commentary: The glyph at C2 has yet to be deciphered. Thompson suggested that the upper sign (T66) is reminiscent of the jade sign. He also believed the action portrayed was jade drilling (1972:39). The common yukatek word for jade is *tun*, the same word for stone in general (Barrera 1980:822). In support of Thompson's identification, the subfix is *na*. The *na* may be a phonetic complement to the word *tun* and T66 was used to distinguish jade from regular stone.

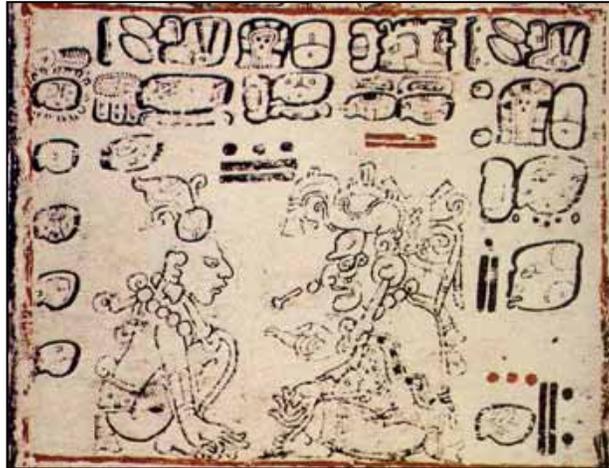
**T'ol 2** days: 8..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph block D1-D4, outcome is negative, *kimi*.

Image: None.

Commentary: The Death God (God A) and *Oxlahun Kanal Kuy* are named in glyph blocks D3 and D4.

Figure 18. Almanac 18



**Day Computations:** 4x65=260 day cycle

T'ol 2                      T'ol 1  
3 MULUK + 33 = 10 Ik'      + 32 =  
3 IX                      + 33 = 10 Manik' + 32 =  
3 KAWAK + 33 = 10 Eb      + 32 =  
3 K'AN                      + 33 = 10 Kaban + 32 =  
3 Muluk -- complete cycle

**General Commentary**

Almanac 18's two t'ols begin with the same glyphs as found in Almanac 17, *nuch*, meaning "to get together head to head" and *hol*, meaning "head". The painted image of Almanac 18 is also similar to the one found in Almanac 17. This apparent pairing of almanacs is a pattern that is evidenced throughout the first twenty three pages.

**T'ol 1** days: 10..Ik', Manik', Eb, Kaban

Prognostication: Glyph blocks A1-C2, outcome is positive, *ahawliil* and *k'aa ha' wah*.

Image: The Maize God and Itzamna sit facing one another.

**T'ol 2** days: 3..Muluk, Ix, Kawak, K'an

Prognostication: Glyph blocks D1-D4, outcome is negative, *kimil*.

Image: None.

Commentary: God Q is named in the passage.

Figure 19. Almanac 19



**Day Computations:**  $5 \times 52 = 260$  day cycle

T'ol 2

T'ol 1

13 OK + 26 = 13 Kawak + 26 =

13 IK' + 26 = 13 Chuwen + 26 =

13 IX + 26 = 13 Ak'bal + 26 =

13 KIMI + 26 = 13 Men + 26 =

13 ETZ'NAB + 26 = 13 Manik' + 26 =

13 Ok -- complete cycle

### General Commentary

The day intervals written into this almanac are completely dysfunctional. Thompson's solution was to change the black numbers from 22 and 22 to 29 and 23, an admitted guess (1972:39). Forstemann had previously suggested correcting both day intervals to 26. This report returns to Forstemann's solution as it better fits the pattern of other two t'ol almanacs and requires less manipulation of the written days.

Each of the two t'ols of Almanac 19 begin with the same two glyphs. The first glyph reads *och-chi-ya*. Decipherment is unsure but, if *och* is the root, it may translate "nourishment" (Barrera 1980:593). The second repeating glyph reads *u kakaw*, "his cacao". The corresponding images of the almanac show deities holding cacao. Interestingly, Cacao is shown in two different stages of production here. In T'ol 1, Chak holds a bowl of processed cacao beans. In T'ol 2, God Q holds a bowl of cacao pods.

**T'ol 1** days: 3..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks A1-B2, outcome is positive, *ox wil*.

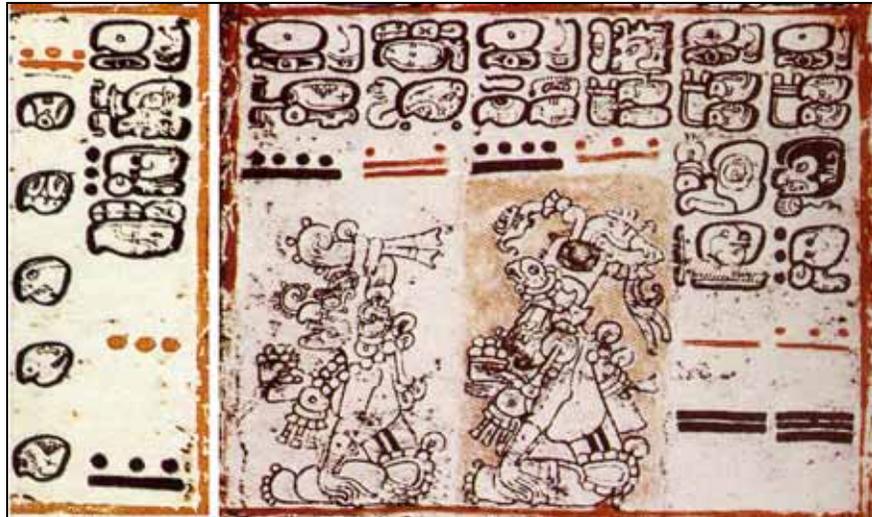
Image: Chak sits holding a bowl of cacao beans.

**T'ol 2** days: 13..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks C1-D2, outcome is negative, *lobil*.

Image: God Q sits holding a bowl of cacao pods.

Figure 20. Almanac 20



**Day Computations:** 5x52=260 day cycle

<u>T'ol 5</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>
8 CHUWEN + 8 = 3 Kawak	+ 9 = 12 Lamat	+ 9 = 8 Kaban	+ 10 = 5 Manik'	+ 16 =
8 AK'BAL + 8 = 3 Chuwen	+ 9 = 12 Ahaw	+ 9 = 8 Muluk	+ 10 = 5 Kawak	+ 16 =
8 MEN + 8 = 3 Ak'bal	+ 9 = 12 Eb	+ 9 = 8 Imix	+ 10 = 5 Chuwen	+ 16 =
8 MANIK' + 8 = 3 Men	+ 9 = 12 K'an	+ 9 = 8 Ben	+ 10 = 5 Ak'bal	+ 16 =
8 KAWAK + 8 = 3 Manik'	+ 9 = 12 Kib	+ 9 = 8 Chikchan	+ 10 = 5 Men	+ 16 =
8 Chuwen -- complete cycle				

**General Commentary**

The final day interval, 16, is written as 15. Each of the five t'ols of Almanac 20 begin with the same glyph. That glyph reads *petah*. No solid reading exists as of yet. If the word's root is *pet*, it may translate "to set spinning". (Barrera 1980:648).

**T'ol 1** days: 3..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks A1-A4, outcome is positive, *ox wil* and *tz'ak ahaw*.

Image: None.

Commentary: K'awil is mentioned in the passage at A2.

**T'ol 2** days: 12..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks B1-C2, outcome is negative, *k'ak tun te* and *lobil*.

Image: The Sun God sits holding a bowl of cacao beans.

**T'ol 3** days: 8..Kaban, Muluk, Imix, Ben, Chikchan

Prognostication: Glyph blocks D1-E2, outcome is positive, *k'aa ha' wah*.

Image: The Maize God sits holding a bowl of cacao beans.

Commentary: The passage includes the glyph *tu chich* meaning "his prognostication".

**T'ol 4** days: 5..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks F1-F4, outcome is negative, *u muk*.

Image: None.

Commentary: The passage includes the name glyph of the vulture headed deity accompanied by the *tu chich* glyph.

**T'ol 5** days: 8..Chuwen, Ak'bal, Men, Manik', Kawak

Prognostication: Glyph blocks G1-G4, outcome is positive, *ox wil*.

Image: None.

Commentary: The passage includes the name glyph of God L accompanied by the *tu chich* glyph.

Figure 21. Almanac 21



**Day Computations:**  $5 \times 52 = 260$  day cycle

<u>T'ol 3</u>		<u>T'ol 1</u>		<u>T'ol 2</u>	
1 IX	+ 13 = 1 Manik'	+ 26 = 1 Ben		+ 13 =	
1 KIMI	+ 13 = 1 Kawak	+ 26 = 1 Chikchan		+ 13 =	
1 ETZ'NAB	+ 13 = 1 Chuwen	+ 26 = 1 Kaban		+ 13 =	
1 OK	+ 13 = 1 Ak'bal	+ 26 = 1 Muluk		+ 13 =	
1 IK	+ 13 = 1 Men	+ 26 = 1 Imix		+ 13 =	
1 Ix -- complete cycle					

### General Commentary

Each of the three t'ols of Almanac 21 begin with the same glyph as Almanac 20, *petah*. This word may translate "to set spinning". Death Gods appear in two of the three t'ols.

**T'ol 1** days: 1..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks A1-B2, outcome is negative, *u muk*.

Image: The Death God (God A) sits.

Commentary: The names of the Death God and a death goddess appear in the passage.

**T'ol 2** days: 1..Ben, Chikchan, Kaban, Muluk, Imix

Prognostication: Glyph blocks C1-D2, outcome is positive, *k'aa ha' wah* and *ahawllil*.

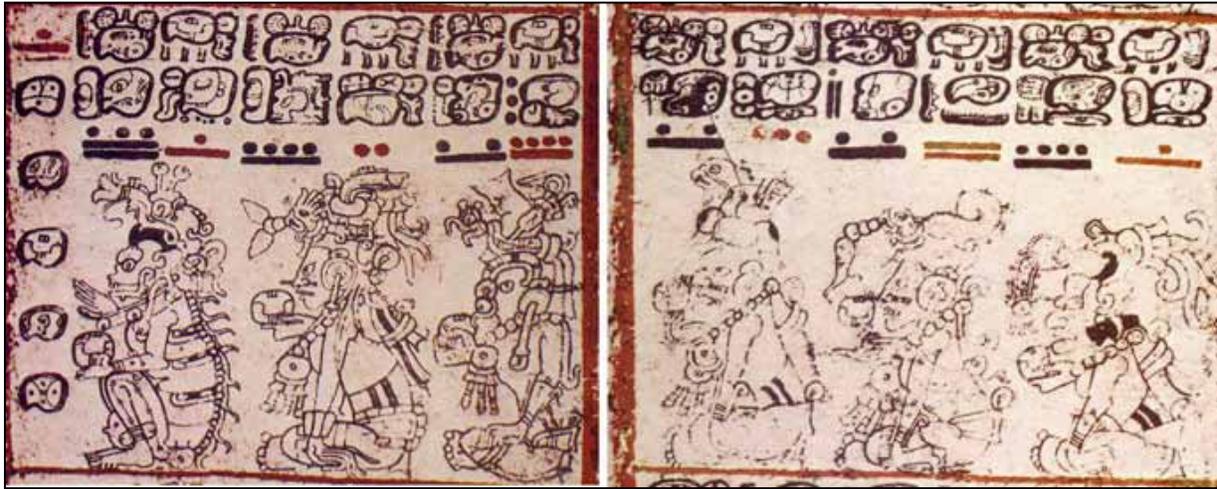
Image: God H sits wearing a flower nose rod.

**T'ol 3** days: 1..Ix, Kimi, Etz'nab, Ok, Ik'

Prognostication: Glyph blocks E1-F2, outcome is negative, *an kimil* and *u muk*.

Image: The Death God (God A) sits.

Figure 22. Almanac 22



**Day Computations:** 5x52=260 day cycle

<u>T'ol 6</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	
6 AHAW	+ 13 = 6 Ben	+ 9 = 2 Ik'	+ 7 =
6 EB	+ 13 = 6 Chikchan	+ 9 = 2 Ix	+ 7 =
6 K'AN	+ 13 = 6 Kaban	+ 9 = 2 Kimi	+ 7 =
6 KIB	+ 13 = 6 Muluk	+ 9 = 2 Etz'nab	+ 7 =
6 LAMAT	+ 13 = 6 Imix	+ 9 = 2 Ok	+ 7 =
6 Ahaw -- complete cycle			

<u>T'ol 3</u>	<u>T'ol 4</u>	<u>T'ol 5</u>	
9 Muluk	+ 7 = 3 Kib	+ 7 = 10 Ak'bal	+ 9 =
9 Imix	+ 7 = 3 Lamat	+ 7 = 10 Men	+ 9 =
9 Ben	+ 7 = 3 Ahaw	+ 7 = 10 Manik'	+ 9 =
9 Chikchan	+ 7 = 3 Eb	+ 7 = 10 Kawak	+ 9 =
9 Kaban	+ 7 = 3 K'an	+ 7 = 10 Chuwen	+ 9 =

**General Commentary**

Each of the six t'ols of Almanac 22 begins with the same two glyphs. The first glyph reads *u mak'*, for which no solid translation yet exists. Thompson translated this glyph as *u tanlah*, "his taking care of" (1972:40). An alternative reading is proposed here. The only verb recorded as *mak'* in the Cordemex translates "to eat bland things with honey and fruit" (1980:486). This reading fits well in context. Both the second repeating glyph and the

objects held by the deities portrayed relate to maize, probably maize tortillas. Further, deities are holding the objects up to their mouths. The second glyph is oddly spelled but apparently reads simply *wah*, a word used throughout the Dresden translating “maize tortillas”. Thompson’s reading of this glyph “maize with *-bil*, sprouting, suffix, new maize, *elotes*” (1972:40), is essentially the same translation.

**T’ol 1** days: 6..Ben, Chikchan, Kaban, Muluk, Imix

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil*.

Image: The Death God (God A) sits shielding his mouth from the *wah* glyph he holds.

**T’ol 2** days: 2..Ik’, Ix, Kimi, Etz’nab, Ok

Prognostication: Glyph blocks C1-D2, outcome is positive, *tz’ak ahaw*.

Image: The Maize God sits holding a *wah* glyph up to his mouth.

**T’ol 3** days: 9..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks E1-F2, outcome is positive, *ox wil*.

Image: God C sits holding a *wah* glyph up to his mouth.

**T’ol 4** days: 3..Kib, Lamat, Ahaw, Eb, K’an

Prognostication: Glyph blocks G1-H2, outcome is positive, *yutzil*.

Image: God L sits holding a *wah* glyph up to his open mouth.

**T’ol 5** days: 10..Ak’bal, Men, Manik’, Kawak, Chuwen

Prognostication: Glyph blocks I1-J2, outcome is negative, *u muk*.

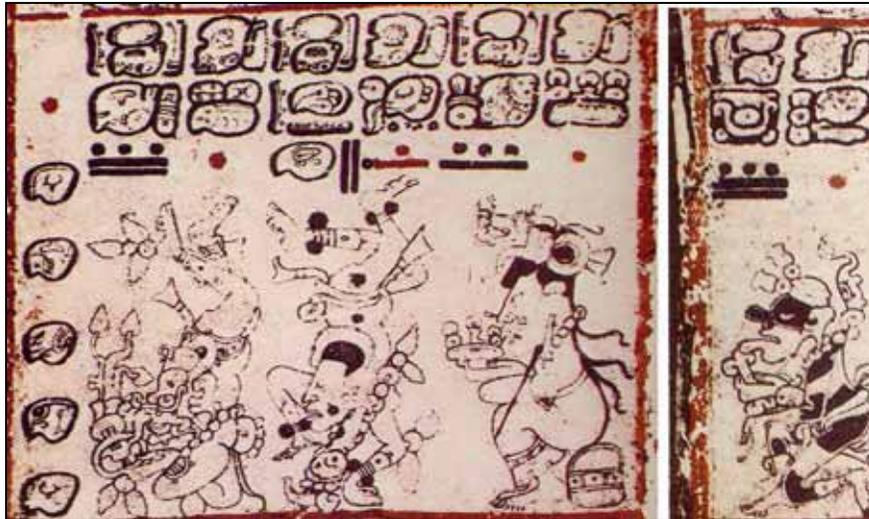
Image: God R sits holding a *wah* glyph up to his open mouth.

**T’ol 6** days: 6..Ahaw, Eb, K’an, Kib, Lamat

Prognostication: Glyph blocks K1-L2, outcome is positive, *ahawliil*.

Image: Itzamna sits holding a *wah* glyph up to his open mouth.

Figure 23. Almanac 23



**Day Computations:**  $4 \times 65 = 260$  day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>
1 IK'	+ 1 Men	+ 31 = 6 Kimi	+ 8 = 1 Ix + 13 =
1 MANIK'	+ 1 Ahaw	+ 31 = 6 Chuwen	+ 8 = 1 Kawak + 13 =
1 EB	+ 1 Chikchan	+ 31 = 6 Kib	+ 8 = 1 K'an + 13 =
1 KABAN	+ 1 Ok	+ 31 = 6 Imix	+ 8 = 1 Muluk + 13 =
1 Ik' -- complete cycle			

**General Commentary**

Each of the four t'ols of Almanac 23 begin with the same two glyphs. They are the same two repeating glyph included in Almanac 13, located in the panel directly above 23. The first may read *u pak'ah*, "he plants". The second repeating glyph may read *tzen*, meaning "food, substance". See the general commentary of Almanac 13 for a further discussion of these two glyphs.

**T'ol 1** days: 1..Men, Ahaw, Chikchan, Ok

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le*.

Image: Chak descends, cacao pods sprouting from his body.

**T'ol 2** days: 6..Kimi, Chuwen, Kib, Imix

Prognostication: Glyph blocks C1-D2, outcome is negative, *u muk* and *an kimil*.

Image: Deity descending with eyes closed, spotted body, and a death symbol pectoral. Cacao pods sprout from his body.

Commentary: The image here is interesting. The deity wears death symbolism but does not appear to be the Death God. The associated glyphic passage does not mention the name of the deity, a strange occurrence in and of itself. The spots may mark the deity as one of the hero twins.

**T'ol 3** days: 1..Ix, Kawak, K'an, Muluk

Prognostication: Glyph blocks E1-F2, outcome is positive, *tun*.

Image: The Moon Goddess sits on a stool holding a jeweled object.

**T'ol 4** days: 1..Ik', Manik', Eb, Kaban

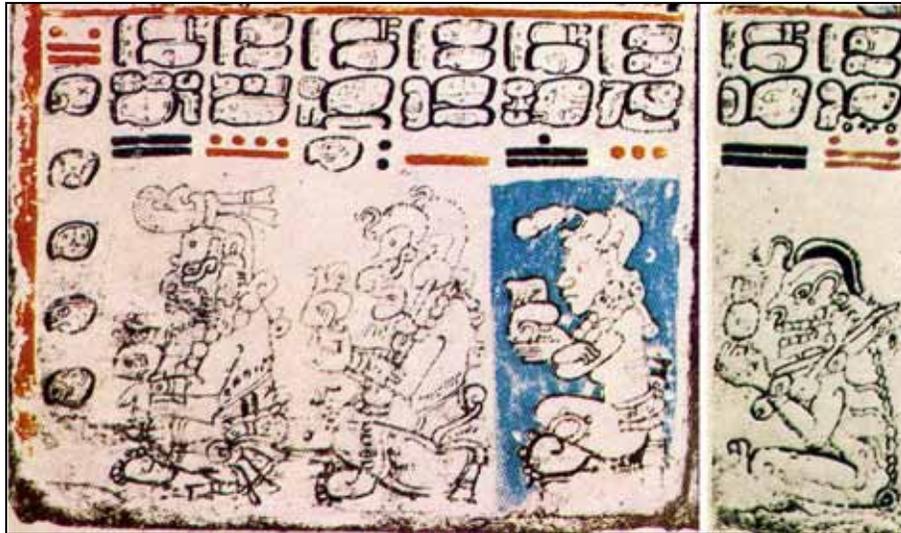
Prognostication: Glyph blocks G1-H2, outcome is positive, *yutzil*.

Image: God M crouches holding a bone.

Commentary: Image and text in this t'ol do not correlate well. The action verb is the same as the three previous t'ols yet God M's peculiar pose seems in no way related to the poses of the other deities.

ALMANAC 24, PAGES 4c-5c

Figure 24. Almanac 24



**Day Computations:** 5x52=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>
12 KAWAK + 10 = 9 Muluk	+ 22 = 5 Chuwen	+ 11 = 3 Ik'	+ 9 =
12 CHUWEN + 10 = 9 Imix	+ 22 = 5 Ak'bal	+ 11 = 3 Ix	+ 9 =
12 AK'BAL + 10 = 9 Ben	+ 22 = 5 Men	+ 11 = 3 Kimi	+ 9 =
12 MEN + 10 = 9 Chikchan	+ 22 = 5 Manik'	+ 11 = 3 Etz'nab	+ 9 =
12 MANIK' + 10 = 9 Kaban	+ 22 = 5 Kawak	+ 11 = 3 Ok	+ 9 =
12 Kawak -- complete cycle			

**General Commentary**

The final day interval, 9, is written as 10. Each of the four t'ols of Almanac 24 begin with the same two glyphs. The first glyph is clearly spelled out and reads *u tum*. Though no reading is widely accepted, the Cordemex lists "to consider, to test, to give order to" (Barrera 1980:820), all reasonable translations in context with the next glyph, *u chich*. Thompson proposed *u.91:koch*, meaning "his---disease"(1972:41). The same glyph, without the *u* prefix, is held up by each of the four deities portrayed in this almanac. A similar set of images, found in Almanac 22, shows deities holding up glyphs signifying an object, maize tortillas. In light of that comparison, it seems highly possible that *tum* refers to a tangible object. The second repeating glyph is the relatively common *u chich* glyph, meaning "his prognostication".

**T'ol 1** days: 9..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks A1-B2, outcome is negative, *nuk men*.

Image: The Sun God sits holding a *tum* glyph out.

**T'ol 2** days: 5..Chuwen, Ak'bal, Men, Manik', Kawak

Prognostication: Glyph blocks C1-D2, outcome is positive, *ahawliil*.

Image: Itzamna sits holding a *tum* glyph out.

**T'ol 3** days: 3..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks E1-F2, outcome is positive, *yo k'in*.

Image: God H sits on a bench holding a *tum* glyph out.

**T'ol 4** days: 12..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks G1-H2, outcome is negative, *an kimil*.

Image: The Death God (God A) sits holding a *tum* glyph out.

Figure 25. Almanac 25



**Day Computations:** 4x65=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	
12 ETZ'NAB + 29 = 2 Manik' + 11 = 13 Etz'nab + 18 = 5 Kib				+ 7 =
12 AK'BAL + 29 = 2 Eb	+ 11 = 13 Ak'bal	+ 18 = 5 Imix		+ 7 =
12 LAMAT + 29 = 2 Kaban	+ 11 = 13 Lamat	+ 18 = 5 Kimi		+ 7 =
12 BEN + 29 = 2 Ik'	+ 11 = 13 Ben	+ 18 = 5 Chuwen		+ 7 =
12 Etz'nab -- complete cycle				

**General Commentary**

Each of the four t'ols of Almanac 25 begins with the same glyph. It is the *k'aa ha' wah* glyph, a common in prognostication outcome statement. Its placement in these passages, however, is not understood. Structurally speaking, *k'aa ha' wah* is in the verbal position of the passages. Its translation "abundance of water and tortillas" does not fit as a verb. It may, however, work with the images of the almanac. The objects held by each of the four deities portrayed are almost certainly related to the repeated *k'aa ha' wah* glyphs above them. The almanacs to either side, Almanacs 24 and 26, both follow that same pattern.

**T'ol 1** days: 2..Manik', Eb, Kaban, Ik

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahawliil* and *ox wil*.

Image: Itzamna sits holding a vessel out.

**T'ol 2** days: 13..Etz'nab, Ak'bal, Lamat, Ben

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil* and *u muk*.

Image: The Death God (God A) sits holding a netted vessel out.

**T'ol 3** days: 5..Kib, Imix, Kimi, Chuwen

Prognostication: Glyph blocks E1-F2, outcome is positive, *tz'ak ahaw* and *yo k'in*.

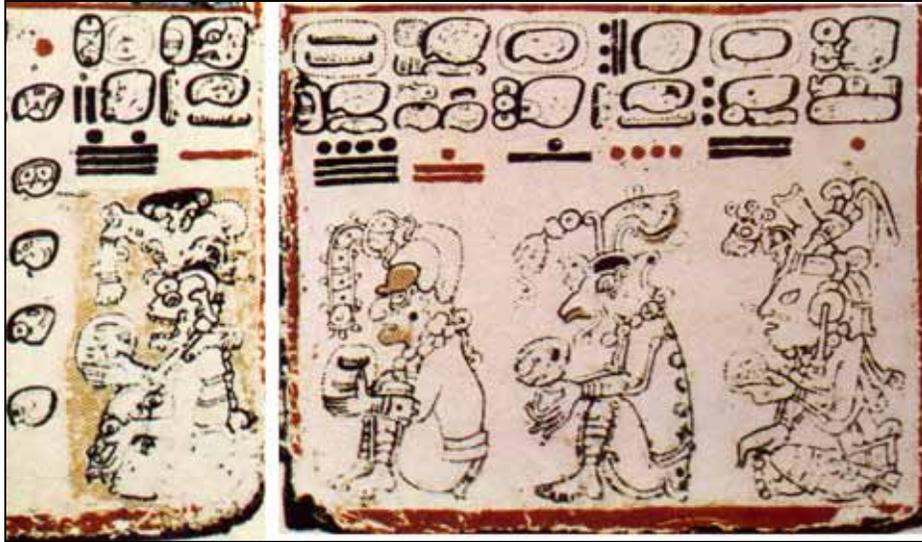
Image: God C stands holding out a netted vessel.

**T'ol 4** days: 12..Etz'nab, Ak'bal, Lamat, Ben

Prognostication: Glyph blocks G1-H2, outcome is negative, *nuk men* and *u muk*.

Image: God R stands holding out a netted vessel.

Figure 26. Almanac 26



**Day Computations:** 5x52=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>
1 CHUWEN + 17 = 5	Lamat + 19 = 11	Manik' + 6 = 4	Ben + 10 =
1 AK'BAL + 17 = 5	Ahaw + 19 = 11	Kawak + 6 = 4	Chikchan + 10 =
1 MEN + 17 = 5	Eb + 19 = 11	Chuwen + 6 = 4	Kaban + 10 =
1 MANIK' + 17 = 5	K'an + 19 = 11	Ak'bal + 6 = 4	Muluk + 10 =
1 KAWAK + 17 = 5	Kib + 19 = 11	Men + 6 = 4	Imix + 10 =
1 Chuwen -- complete cycle			

**General Commentary**

Each of the four t'ols of Almanac 26 begins with a glyph which repeats the associated image. The glyph is different in each t'ol but always repeats, functioning as an object held by deities, in the associated image.

**T'ol 1** days: 5..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks A1-B2, outcome is negative, *u muk*.

Image: The Death God (God A) sits holding a sphere with a human face in it.

Commentary: The first glyph of this t'ol (A1) is not fully deciphered and thus its connection to the object which the Death God holds is not clear. The prefix is *tok'*, meaning "flint". As a side note, it appears that this t'ol uses the name of God R, a strongly negative deity, as an outcome glyph.

**T'ol 2** days: 11..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks C1-D2, outcome is positive, *ahawlit* and *k'aa ha' wah*.

Image: Itzamna sits holding a *kaka* glyph, presumably cacao.

**T'ol 3** days: 4..Ben, Chikchan, Kaban, Muluk, Imix

Prognostication: Glyph blocks E1-F2, outcome is negative, *u muk*.

Image: Oxlahun Kanal sits holding a *mu* glyph.

Commentary: The name of the Owl Deity ends with the Maya word for owl, *kuy*. While there is no doubt that the glyph is meant to be read *kuy*, it is spelled in reverse order, *yu ku*. This is one of the best examples of this kind of inversion found in the first twenty three pages.

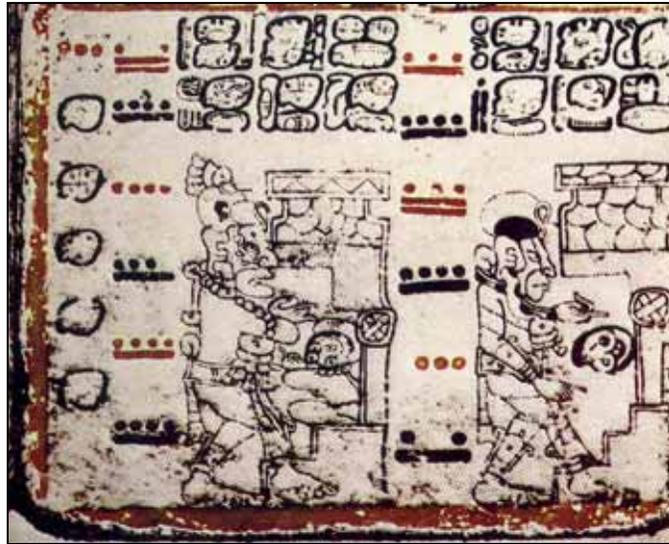
**T'ol 4** days: 1..Chuwen, Ak'bal, Men, Manik', Kawak

Prognostication: Glyph blocks G1-H2, outcome is neutral, *ox wil* and *nuk men*.

Image: God H sits holding an unreadable glyph.

Commentary: The split decision of this last t'ol is interesting. This is the only clearly neutral prognostications in the first twenty three pages.

Figure 27. Almanac 27



**Day Computations:** 5x52=260 day cycle

<u>T'ol 2(6)</u>	<u>T'ol 1(1)</u>	<u>T'ol 2(2)</u>	<u>T'ol 1(3)</u>
3 KIB	+ 9 = 12 Chikchan	+ 9 = 8 Ix	+ 9 = 4 Ak'bal + 9 =
3 LAMAT	+ 9 = 12 Kaban	+ 9 = 8 Kimi	+ 9 = 4 Men + 9 =
3 AHAW	+ 9 = 12 Muluk	+ 9 = 8 Etz'nab	+ 9 = 4 Manik' + 9 =
3 EB	+ 9 = 12 Imix	+ 9 = 8 Ok	+ 9 = 4 Kawak + 9 =
3 K'AN	+ 9 = 12 Ben	+ 9 = 8 Ik'	+ 9 = 4 Chuwen + 9 =
3 Kib -- complete cycle			

<u>T'ol 2(4)</u>	<u>T'ol 1(5)</u>
13 Eb	+ 9 = 9 Imix + 7 =
13 K'an	+ 9 = 9 Ben + 7 =
13 Kib	+ 9 = 9 Chikchan + 7 =
13 Lamat	+ 9 = 9 Kaban + 7 =
13 Ahaw	+ 9 = 9 Muluk + 7 =

**General Commentary**

This almanac has a total of six day interval groups that share two t'ols, three for each t'ol. The pattern is similar to Almanac 14 in which pairs of day interval groups share prognostications. The prognostication texts included six rather than the normal four glyph blocks. Both t'ols begin with the same two glyphs. The first glyph

was originally translated by Thompson as “reddening all over”, keying on the syllabic sign *chak*. His interpretational support was based on Yukatek myths of *dwendes* who supply prophecies (1972:42). The reading suggested here is *u chak’ah*. In the Cordemex, the word *chak’ah* translates “to close the eyelids and produce signs” (1980:80). This reading is tentative as yet but makes good sense in the general context of prognostication. The problem with that reading lies in the combining of non-glottal stop of the final *-k* in *chak* with the glottal stop in *k’a*. Nikolai Grube (pc to Schele 1994) has suggested that the *chak* sign is in fact a *te* sign, making the reading *tek’ah*, “to step on”. The second repeating glyph reads simply *na*, which commonly translates “house”. The associated images of temples support that reading.

**T’ol 1** days: 12..Chikchan, Kaban, Muluk, Imix, Ben

4..Ak’bal, Men, Manik’, Kawak, Chuwen

9..Imix, Ben, Chikchan, Kaban, Muluk

Prognostication: Glyph blocks A1-C2, outcome is positive, *ahaw le*, *ahawliil* and *yo k’in*.

Image: Itzamna mounts the stairs of a temple with a tiny God C inside.

**T’ol 2** days: 3..Kib, Lamat, Ahaw, Eb, K’an

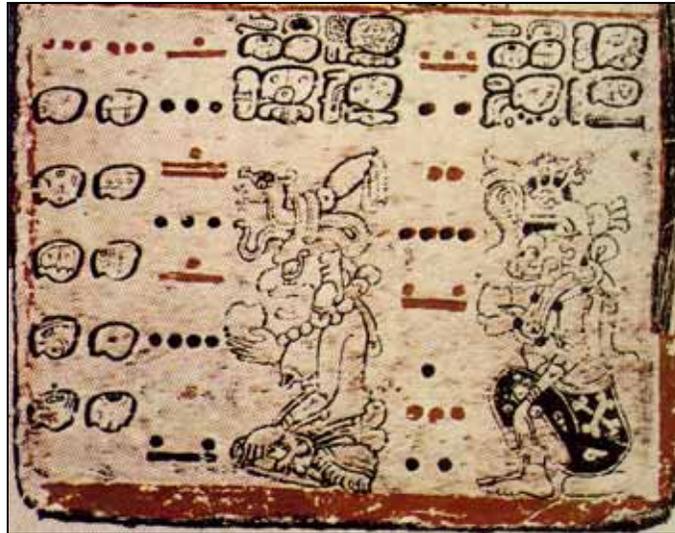
8..Ix, Kimi, Etz’nab, Ok, Ik’

13..Eb, K’an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks D1-F2, outcome is negative, *lob*, *u muk*, and *nuk men*.

Image: God Q mounts the stairs of a temple with a *mu* glyph inside.

Figure 28. Almanac 28



**Day Computations:** 10x26=260 day cycle

<u>T'ol 2(8)</u>	<u>T'ol 1(1)</u>	<u>T'ol 2(2)</u>	<u>T'ol 1(3)</u>	
3 BEN	+ 3 = 6 Kib	+ 2 = 8 Etz'nab	+ 3 = 11 Imix	+ 4 =
3 KAWAK	+ 3 = 6 Ik'	+ 2 = 8 K'an	+ 3 = 11 Manik'	+ 4 =
3 CHIKCHAN	+ 3 = 6 Lamat	+ 2 = 8 Ok	+ 3 = 11 Ben	+ 4 =
3 CHUWEN	+ 3 = 6 Ix	+ 2 = 8 Kib	+ 3 = 11 Kawak	+ 4 =
3 KABAN	+ 3 = 6 Ahaw	+ 2 = 8 Ik'	+ 3 = 11 Chikchan	+ 4 =
3 AK'BAL	+ 3 = 6 Kimi	+ 2 = 8 Lamat	+ 3 = 11 Chuwen	+ 4 =
3 MULUK	+ 3 = 6 Eb	+ 2 = 8 Ix	+ 3 = 11 Kaban	+ 4 =
3 MEN	+ 3 = 6 Etz'nab	+ 2 = 8 Ahaw	+ 3 = 11 Ak'bal	+ 4 =
3 IMIX	+ 3 = 6 K'an	+ 2 = 8 Kimi	+ 3 = 11 Muluk	+ 4 =
3 MANIK'	+ 3 = 6 Ok	+ 2 = 8 Eb	+ 3 = 11 Men	+ 4 =
3 Ben -- cycle complete				

<u>T'ol 2(4)</u>	<u>T'ol 1(5)</u>	<u>T'ol 2(6)</u>	<u>T'ol 1(7)</u>
2 Chikchan + 4 = 6	Muluk + 1 = 7	Ok + 7 = 1	Kaban + 2 =
2 Chuwen + 4 = 6	Men + 1 = 7	Kib + 7 = 1	Ak'bal + 2 =
2 Kaban + 4 = 6	Imix + 1 = 7	Ik' + 7 = 1	Muluk + 2 =
2 Ak'bal + 4 = 6	Manik' + 1 = 7	Lamat + 7 = 1	Men + 2 =
2 Muluk + 4 = 6	Ben + 1 = 7	Ix + 7 = 1	Imix + 2 =
2 Men + 4 = 6	Kawak + 1 = 7	Ahaw + 7 = 1	Manik' + 2 =
2 Imix + 4 = 6	Chikchan + 1 = 7	Kimi + 7 = 1	Ben + 2 =
2 Manik' + 4 = 6	Chuwen + 1 = 7	Eb + 7 = 1	Kawak + 2 =
2 Ben + 4 = 6	Kaban + 1 = 7	Etz'nab + 7 = 1	Chikchan + 2 =
2 Kawak + 4 = 6	Ak'bal + 1 = 7	K'an + 7 = 1	Chuwen + 2 =

### General Commentary

Similar to Almanac 27, this almanac contains eight day interval groups which share two t'ols, four for each t'ol. Both of the t'ols begin with the same glyph, the familiar outcome glyph, *k'aa ha' wah*.

**T'ol 1** days: 6..Kib, Ik', Lamat, Ix, Ahaw, Kimi, Eb, Etz'nab, K'an, Ok

11..Imix, Manik', Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men

6..Muluk, Men, Imix, Manik', Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal

1..Kaban, Ak'bal, Muluk, Men, Imix, Manik', Ben, Kawak, Chikchan, Chuwen

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahawliil* and *yo k'in*.

Image: Itzamna sits holding a container.

Commentary: The outcome glyph *yo k'in* has a *li* suffix.

**T'ol 2** days: 3..Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men, Imix, Manik'

8..Etz'nab, K'an, Ok, Kib, Ik', Lamat, Ix, Ahaw, Kimi, Eb

2..Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men, Imix, Manik', Ben, Kawak

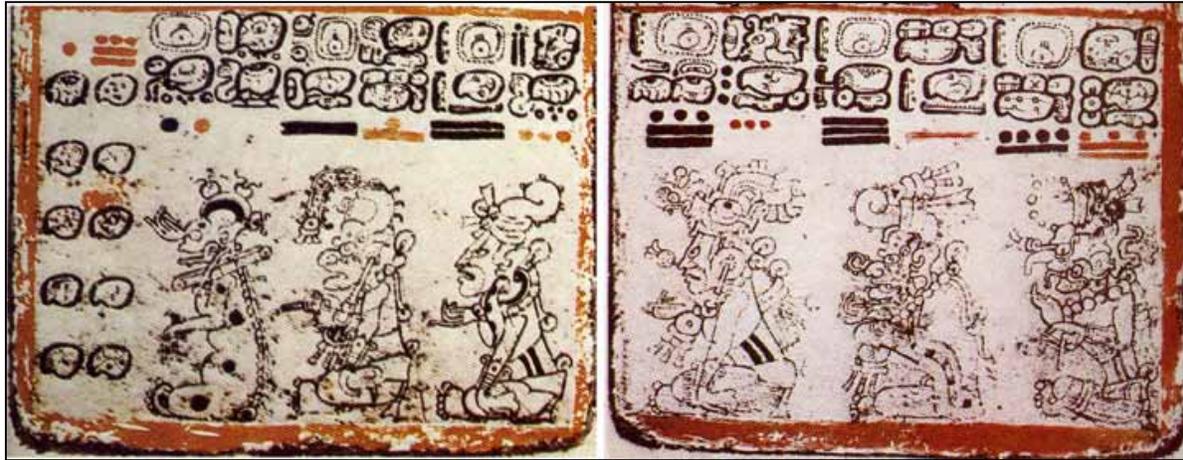
7..Ok, Kib, Ik', Lamat, Ix, Ahaw, Kimi, Eb, Etz'nab, K'an

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil* and *u muk*.

Image: The Death God (God A) sits holding a container.

ALMANAC 29, PAGES 10c-11c

Figure 29. Almanac 29



**Day Computations:** 2 separate cycles of  $5 \times 52 = 260$  day cycles

cycle 1: started one t'ol in

<u>T'ol 6</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	
13 Eb	+ 1 = 1 IMIX	+ 5 = 6 Kimi	+ 10 =
13 K'an	+ 1 = 1 BEN	+ 5 = 6 Etz'nab	+ 10 =
13 Kib	+ 1 = 1 CHIKCHAN	+ 5 = 6 Ok	+ 10 =
13 Lamat	+ 1 = 1 KABAN	+ 5 = 6 Ik'	+ 10 =
13 Ahaw	+ 1 = 1 MULUK	+ 5 = 6 Ix	+ 10 =
13 Eb -- complete cycle			

<u>T'ol 3</u>	<u>T'ol 4</u>	<u>T'ol 5</u>	
3 Kib	+ 13 = 3 Muluk	+ 15 = 5 K'an	+ 8 =
3 Lamat	+ 13 = 3 Imix	+ 15 = 5 Kib	+ 8 =
3 Ahaw	+ 13 = 3 Ben	+ 15 = 5 Lamat	+ 8 =
3 Eb	+ 13 = 3 Chikchan	+ 15 = 5 Ahaw	+ 8 =
3 K'an	+ 13 = 3 Kaban	+ 15 = 5 Eb	+ 8 =

cycle 2:

<u>T'ol 6</u>		<u>T'ol 1</u>		<u>T'ol 2</u>	
13 KIMI	+ 1 =	1 Manik'	+ 5 =	6 Eb	+ 10 =
13 ETZ''NAB	+ 1 =	1 Kawak	+ 5 =	6 K'an	+ 10 =
13 OK	+ 1 =	1 Chuwen	+ 5 =	6 Kib	+ 10 =
13 IK'	+ 1 =	1 Ak'bal	+ 5 =	6 Lamat	+ 10 =
13 IX	+ 1 =	1 Men	+ 5 =	6 Ahaw	+ 10 =
13 Kimi -- complete cycle					

<u>T'ol 3</u>		<u>T'ol 4</u>		<u>T'ol 5</u>	
3 Ik'	+ 13 =	3 Men	+ 15 =	5 Ok	+ 8 =
3 Ix	+ 13 =	3 Manik'	+ 15 =	5 Ik'	+ 8 =
3 Kimi	+ 13 =	3 Kawak	+ 15 =	5 Ix	+ 8 =
3 Etz'nab	+ 13 =	3 Chuwen	+ 15 =	5 Kimi	+ 8 =
3 Ok	+ 13 =	3 Ak'bal	+ 15 =	5 Etz'nab	+ 8 =

### **General Commentary**

The day computations of this almanac present a reading order problem. There are two columns of five day names that begin the almanac. Their associated numeric coefficients, however, are different. One group begins with the number one and the other with the number thirteen. Only the number thirteen works with the successive numbers of the almanac, the number one does not. Thompson suggested that the one cycle can work if it is begun at the first t'ol in, which also begins with one (1972:43). Thompson's idea is demonstrated in the above day computations but, as he himself stated, the solution is imperfect. Especially when viewed in the format employed by this study, Thompson's solution seems imperfect because it begins with unwritten day names.

Each of the almanac's six t'ols begins with the same glyph. That glyph is read *mol*. Thompson did not find a suitable translation. The Cordemex, however, contains a translation of *mol* as "to gather up" (1980:527). The associated images do little to support or contradict that reading.

**T'ol 1** days: 1..Manik', Kawak, Chuwen, Ak'bal, Men

and possibly 1..Imix, Ben, Chikchan, Kaban, Muluk

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil* and *lobah*.

Image: The Death God (God A) sits.

**T'ol 2** days: 6..Eb, K'an, Kib, Lamat, Ahaw

and possibly 6..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks C1-D2, outcome is positive, *ahawliil* and *tz'ak ahaw*.

Image: Itzamna sits.

**T'ol 3** days: 3..Ik', Ix, Kimi, Etz'nab, Ok

and possibly 3..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks E1-F2, outcome is negative, *u muk* and *lobil*.

Image: God Q sits.

**T'ol 4** days: 3..Men, Kaban, Kawak, Chuwen, Ak'bal

and possibly 3..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks G1-H2, outcome is positive, *k'aa ha' wah* and *ox wil*.

Image: The Maize God sits.

**T'ol 5** days: 5..Ok, Ik', Ix, Kimi, Etz'nab

and possibly 5..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks I1-J2, outcome is negative, *k'ak' tun te* and *u muk*.

Image: The Sun God sits.

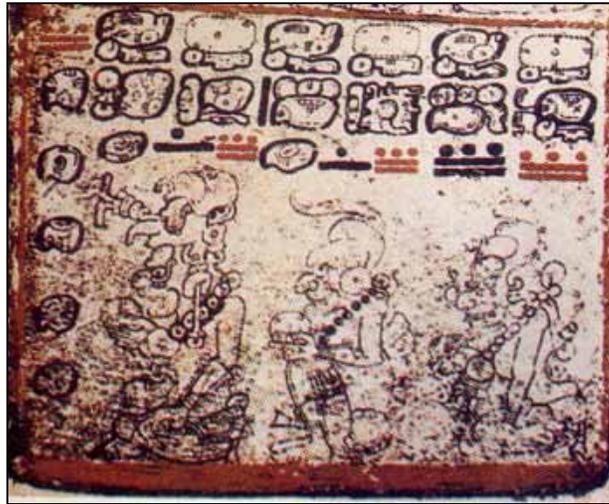
**T'ol 6** days: 13..Kimi, Etz'nab, Ok, Ik', Ix

and possibly 13..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks K1-L2, outcome is positive, *ahaw le* and *yutzil*.

Image: Chak sits.

Figure 30. Almanac 30



**Day Computations:**  $4 \times 65 = 260$  day cycle

<u>T'ol 3</u>	<u>T'ol 1</u>	<u>T'ol 2</u>
13 CHUWEN + 26 = 13 Kaban	+ 26 = 13 Ak'bal	+ 13 =
13 KIB + 26 = 13 Ik'	+ 26 = 13 Lamat	+ 13 =
13 IMIX + 26 = 13 Manik'	+ 26 = 13 Ben	+ 13 =
13 KIMI + 26 = 13 Eb	+ 26 = 13 Etz'nab	+ 13 =
13 Chuwen -- complete cycle		

### General Commentary

Each of the three t'ols of Almanac 30 begins with the same two glyphs. The first glyph clearly reads *k'aw*. Unfortunately, no reasonable decipherment has been offered. Thompson believed the glyph to translate *lahbil*, meaning "to set in order" (1972:44). The second repeating glyph, translated *kinte* by Thompson (1972:44), may instead read *nikte*, referring to a type of plumeria flower (Schele et al.:1994). The same glyph also repeats in the images of each t'ol. The deities displayed hold the *nik* glyph in their hands. This suggests that whatever the meaning of said glyph, it is a tangible object. Considering that, "flower" makes more sense than the "the day divinations?" translation proposed by Thompson in 1972.

Thompson was unsure whether or not to call this almanac divinatory. In his opinion, the almanac lacks standard augural glyphs. In fact, only T'ol 2 lacks a standard augural glyph. Instead, the name of the Maize God appears. It is proposed here that the benevolent presence of the Maize God was substituted for the standard positive augural outcome.

**T'ol 1** days: 13..Kaban, Ik', Manik', Eb

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahawli*.

Image: Itzamna sits holding a *nik* glyph and wearing a Chak headdress.

Commentary: The deity name glyph of this t'ol does not correlate with the deity portrayed, Itzamna. Instead, the name of God H is mentioned.

**T'ol 2** days: 13..Ak'bal, Lamat, Ben, Etz'nab

Prognostication: Glyph blocks C1-D2, outcome is positive, name of the Maize God.

Image: Ho Pawatun sits holding a *nik* glyph.

**T'ol 3** days: 13..Kib, Imix, Kimi, Chuwen

Prognostication: Glyph blocks E1-F2, outcome is negative, *k'ak' tun te*.

Image: The Sun God sits holding a *nik* glyph.

ALMANAC 31, PAGES 13c-14c

Figure 31. Almanac 31



**Day Computations:** 10x26=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	
2 MEN	+ 7 = 9 Ik'	+ 3 = 12 Chikchan	+ 3 = 2 Lamat	+ 13 =
2 IMIX	+ 7 = 9 Lamat	+ 3 = 12 Chuwen	+ 3 = 2 Ix	+ 13 =
2 MANIK'	+ 7 = 9 Ix	+ 3 = 12 Kaban	+ 3 = 2 Ahaw	+ 13 =
2 BEN	+ 7 = 9 Ahaw	+ 3 = 12 Ak'bal	+ 3 = 2 Kimi	+ 13 =
2 KAWAK	+ 7 = 9 Kimi	+ 3 = 12 Muluk	+ 3 = 2 Eb	+ 13 =
2 CHIKCHAN	+ 7 = 9 Eb	+ 3 = 12 Men	+ 3 = 2 Etz'nab	+ 13 =
2 CHUWEN	+ 7 = 9 Etz'nab	+ 3 = 12 Imix	+ 3 = 2 K'an	+ 13 =
2 KABAN	+ 7 = 9 K'an	+ 3 = 12 Manik'	+ 3 = 2 Ok	+ 13 =
2 AK'BAL	+ 7 = 9 Ok	+ 3 = 12 Ben	+ 3 = 2 Kib	+ 13 =
2 MULUK	+ 7 = 9 Kib	+ 3 = 12 Kawak	+ 3 = 2 Ik'	+ 13 =
2 Men -- complete cycle				

**General Commentary**

Each of the four t'ols of this almanac involves pairing of beings in both their glyphic passages and the associated images. The second glyph of each t'ol is the same. It reads *yatan*, which has been commonly translated “wife of” and more recently “his/her offering, payment” by Bob Wald (1995). The content of the images in this almanac suggest that both definitions may be intended.

**T'ol 1** days: 9..Ik', Lamat, Ix, Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib

Prognostication: Glyph blocks A1-B2, outcome is negative, *u muk*.

Image: Wuk Zip, God of Hunting, grasps the front leg of a deer.

Commentary: The first glyph of this t'ol (A1) refers to the deer. It appears to read *k'an chinal winik*. The third glyph in the passage (B1) reads *wuk zip*, the name of the God of Hunting (Taube 1992:61).

**T'ol 2** days: 12..Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men, Imix, Manik', Ben, Kawak

Prognostication: Glyph block C1-D2, outcome is negative, *nuk men*.

Image: A female figure with a vulture head kneels on a mat in front of a barking dog. This image seems to have both coitus and marriage symbolism. The dog's penis is erect and the vulture woman's action, sitting upon a mat (an action commonly associated with marriage), suggest sexual union.

Commentary: This t'ol was an important part of Knorozov's landmark 1952 paper in support of phoneticism. He was the first to read the words for vulture (*kuch*) and dog (*tz'ul*) from the associated text (1952:17). Thompson agreed that those glyphs named the animals in the scene below but never accepted the phonetic readings proposed by Knorozov.

**T'ol 3** days: 2..Lamat, Ix, Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib, Ik'

Prognostication: Glyph blocks E1-G2, outcome is positive, *ahaw lil, ya mu la na(?)*, and *ox ok wah*.

Image: Itzamna holds an animal which cannot be identified.

Commentary: The name of the animal, appearing in glyph block E1, has yet to be deciphered. Its syllables appear to read *ta li ma*.

**T'ol 4** days: 2..Men, Imix, Manik', Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal, Muluk

Prognostication: Glyph blocks H1-J2, outcome is positive, *ahaw le, yutzil*, and *k'aa ha' wah*.

Image: God L holds the Moon Goddess.

Figure 32. Almanac 32



**Day Computations:** 10x26=260 day cycle

T'ol 2

T'ol 1

3 LAMAT + 12 = 2 Ahaw + 14 =

3 IX + 12 = 2 Kimi + 14 =

3 AHAW + 12 = 2 Eb + 14 =

3 KIMI + 12 = 2 Etz'nab + 14 =

3 EB + 12 = 2 K'an + 14 =

3 ETZ'NAB + 12 = 2 Ok + 14 =

3 K'AN + 12 = 2 Kib + 14 =

3 OK + 12 = 2 Ik' + 14 =

3 KIB + 12 = 2 Lamat + 14 =

3 IK' + 12 = 2 Ix + 14 =

3 Lamat -- complete cycle

### General Commentary

Both of the two t'ols of Almanac 32 begin with the same two glyphs. The first glyph, which also appears in Almanac 22, may read *u mak'*, "to eat bland things with honey or fruit". Refer to Almanac 22's commentary for more regarding this glyph. The second repeating glyph may read either *nikte* or *kinte*. The *ni* suffix attached to the word makes *kinte* the more likely choice in this almanac. There are other cases however, Almanac 30 for example, in which the *ni* suffix is absent. Whatever its meaning, the same glyph is held by the two deities in the associated images, leading one to believe it refers to a tangible object.

**T'ol 1** days: 2..Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib, Ik', Lamat, Ix

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil*.

Image: The Death God (God A) sits holding a *nik* or *kin* glyph.

Commentary: The first glyph's internal reading order is altered from others like it. It should read *u mak'*.

Instead, it reads *k'ama(w)*, meaning "to receive" (Barrera 1980:371). Bob Wald believes the final syllable *wa* is a Cholan language convention, not present in Yukatek (personal communication).

**T'ol 2** days: 3..Lamat, Ix, Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib, Ik'

Prognostication: Glyph blocks C1-D2, outcome is positive, name of God H.

Image: Itzamna sits holding a *nik* or *kin* glyph.

Commentary: Where as God H is not strictly benevolent, his combination with Itzamna suggests he is good luck in this context.

Figure 33. Almanac 33



**Day Computations:**  $5 \times 52 = 260$  day cycle (no starting numeric coefficient)

<u>T'ol 2</u>		<u>T'ol 1</u>	
K'AN	+ 21 =	Chikchan	+ 31 =
KIB	+ 21 =	Kaban	+ 31 =
LAMAT	+ 21 =	Muluk	+ 31 =
AHAW	+ 21 =	Imix	+ 31 =
EB	+ 21 =	Ben	+ 31 =
K'an -- complete cycle			

### General Commentary

This is the first of the almanacs referred to as the “Moon Goddess Pages”. There are twenty in all. This is also the first almanac of five almanacs which do not have set day name coefficients. Instead, any of the numbers (1 through 13) can be inserted at the beginning to form a complete 260-day cycle. This interesting cycle form will be discussed further in the numerology section. Each of the two t'ols of Almanac 33 include the same glyph, *u kuch*, meaning “her burden” (Barrera 1980:342). The associated images strongly support this reading. *U kuch* is one of the most common glyphs found in the Moon Goddess Pages.

**T'ol 1** days: X..Chikchan, Kaban, Muluk, Imix, Ben

Prognostication: Glyph blocks A1-B2, outcome is negative, *u muk*.

Image: The Moon Goddess carries the Death God (God A) on her back.

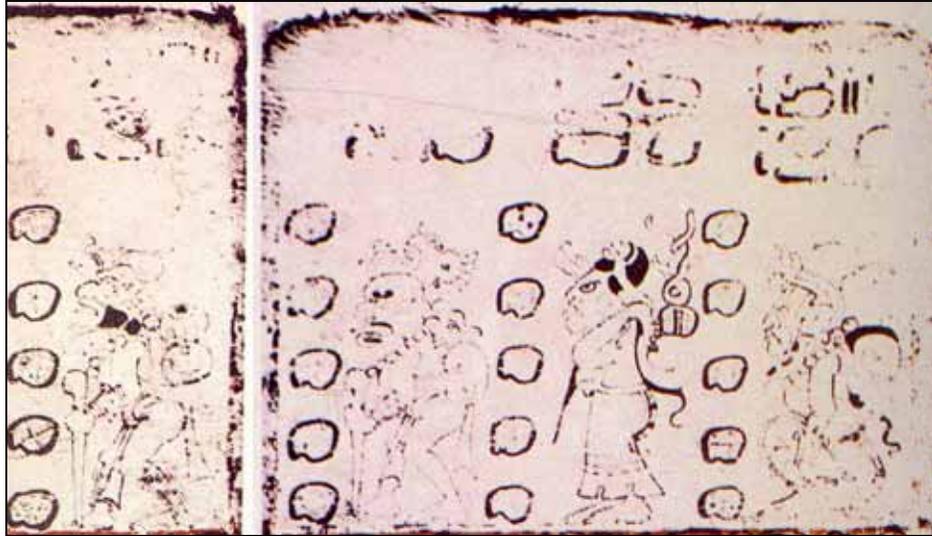
**T'ol 2** days: X..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks C1-D2, outcome is positive, Maize God / *ha' wah*.

Image: The Moon Goddess carries the glyph compound *ha' wah* and a smoking or feathered *ahaw* glyph.

Commentary: The augural outcome glyph of this t'ol was placed in the image only. It does not occur in the text. Instead, as in Almanac 30, the name of the Maize God is substituted.

Figure 34. Almanac 34



**Day Computations:** unknown cycle, no associated numbers

### General Commentary

This is one of the most enigmatic divinatory almanacs in the first twenty three pages. The glyphic passages are mostly destroyed. The associated day names are written into each of the four t'ols. All twenty day names, in their regular Imix through Ahaw order, are represented. The four year bearers; Kawak, K'an, Muluk, and Ix appear across the bottom row. Almanac 38 also displays the twenty day names in order (reversed). Both almanacs will be discussed further in the numerology section.

**T'ol 1** days: Men, Kib, Kaban, Etz'nab, Kawak

Prognostication: Glyph blocks A1-B2, outcome is positive, *ha' wah*.

Image: A Merchant God (Thompson 1972:52) walks holding a staff and carrying a *ha' wah* glyphic compound.

Commentary: As in T'ol 2 of Almanac 33, the augural outcome glyph is incorporated into image.

**T'ol 2** days: Ahaw, Imix, Ik', Ak'bal, K'an

Prognostication: Glyph blocks C1-D2, outcome is uncertain, destroyed text.

Image: God N, Ho Pawatun, walks holding a staff and carrying an unknown object.

Commentary: The only remaining glyph is the name glyph of God N, Ho Pawatun. Thompson suggested that the object displayed as God N's burden relates to the augural outcome (1972:52).

**T'ol 3** days: Chikchan, Kimi, Manik', Lamat, Muluk

Prognostication: Glyph blocks E1-F2, outcome is negative, *nuk men*.

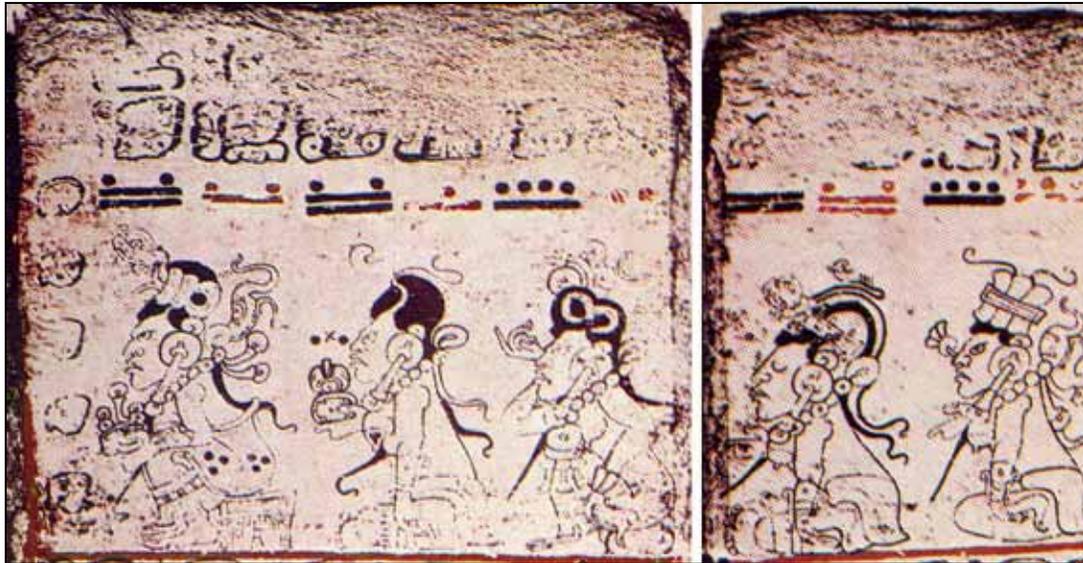
Image: The Moon Goddess walks carrying a *k'ak'* glyph.

**T'ol 4** days: Ok, Chuwen, Eb, Ben, Ix

Prognostication: Glyph blocks G1-H2, outcome is negative, *u muk* and *lob*.

Image: God Q sits carrying a death head on his back.

Figure 35. Almanac 35



**Day Computations:** 5x52=260 day cycle

<u>T'ol 5</u>		<u>T'ol 1</u>		<u>T'ol 2</u>		<u>T'ol 3</u>		<u>T'ol 4</u>
8 IK'	+ 12 =	7 Ix	+ 12 =	6 Kimi	+ 9 =	2 Men	+ 10 =	12 Chikchan + 9 =
8 IX	+ 12 =	7 Kimi	+ 12 =	6 Etz'nab	+ 9 =	2 Manik'	+ 10 =	12 Kaban + 9 =
8 KIMI	+ 12 =	7 Etz'nab	+ 12 =	6 Ok	+ 9 =	2 Kawak	+ 10 =	12 Muluk + 9 =
8 ETZ'NAB	+ 12 =	7 Ok	+ 12 =	6 Ik'	+ 9 =	2 Chuwen	+ 10 =	12 Imix + 9 =
8 OK	+ 12 =	7 Ik'	+ 12 =	6 Ix	+ 9 =	2 Ak'bal	+ 10 =	12 Men + 9 =
8 Ik' -- complete cycle								

**General Commentary**

Unfortunately, the majority of texts in Almanac 35 are destroyed. The Moon Goddess is portrayed five times, once for each t'ol. Thompson, noting differences in costume, was cautious to identify all five deities as the Moon Goddess (1972:53). The associated name glyphs, however, still visible in four of the five t'ols, are clearly the name of the Moon Goddess.

**T'ol 1** days: 7..Ix, Kimi, Etz'nab, Ok, Ik'

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahawlitl*.

Image: The Moon Goddess sits holding a jeweled object.

Commentary: Glyph block A1 contains a glyph identical to the object held by the Moon Goddess in the associated image. In the commentary of Almanac 23, the reading *tun* meaning “jade” was proposed for this glyph. *I'nah*, meaning “seeds” has also been suggested (Schele et al. 1994).

**T'ol 2** days: 6..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks C1-D2, outcome is probably positive, *yax k'an*.

Image: The Moon Goddess sits holding a *yax k'an* glyph compound.

Commentary: Due to the destruction of the text, the positive augural outcome is suggested primarily because of the positive content of the *yax k'an* glyph held by the Moon Goddess.

**T'ol 3** days: days: 2..Men, Manik', Kawak, Chuwen, Ak'bal

Prognostication: Glyph blocks E1-F2, outcome is negative, *an kimil*.

Image: The Moon Goddess sits with a hand up to her face.

**T'ol 4** days: 12..Chikchan, Kaban, Muluk, Imix, Men

Prognostication: Glyph blocks G1-H2, outcome is uncertain, all glyphs destroyed.

Image: The Moon Goddess sits with her eyes closed.

Commentary: Thompson suggested that the closed eyes of the Moon Goddess marks her as the wife of the Death God (1972:53). If he is correct, the prognostication is surely negative.

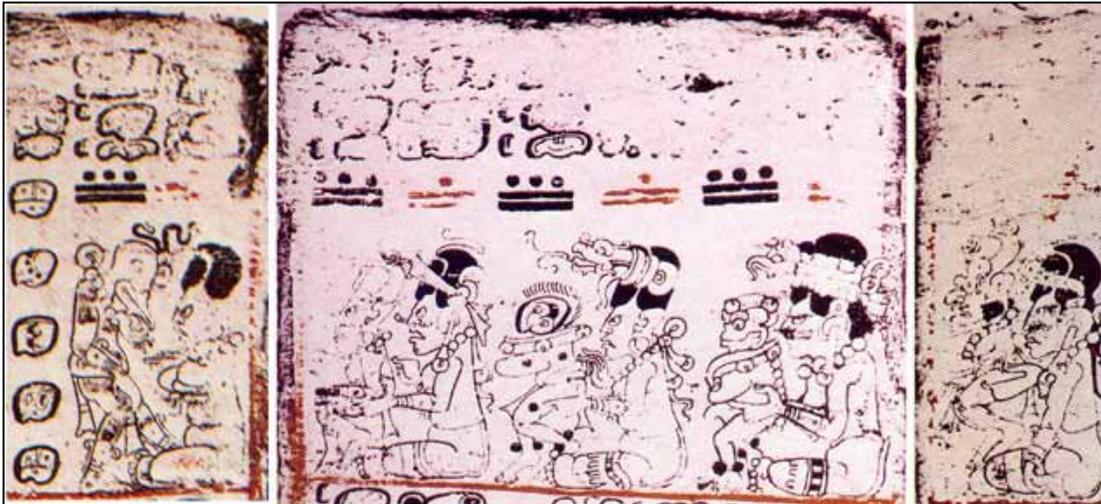
**T'ol 5** days: 8..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks I1-J2, outcome is uncertain, destroyed glyphs.

Image: The Moon Goddess sits with a flower in her nose.

Commentary: Though the augural outcome glyph is illegible, the tone of the associated image suggests the prognostication was positive.

Figure 36. Almanac 36



**Day Computations:**  $4 \times 65 = 260$  day cycle

<u>T'ol 5</u>		<u>T'ol 1</u>		<u>T'ol 2</u>		<u>T'ol 3</u>		<u>T'ol 4</u>	
11 AHAW	+ 13 =	11 Ben	+ 13 =	11 Kimi	+ 13 =	11 Kawak	+ 13 =	11 Eb	+ 13 =
11 CHIKCHAN	+ 13 =	11 Etz'nab	+ 13 =	11 Chuwen	+ 13 =	11 K'an	+ 13 =	11 Kaban	+ 13 =
11 OK	+ 13 =	11 Ak'bal	+ 13 =	11 Kib	+ 13 =	11 Muluk	+ 13 =	11 Ik'	+ 13 =
11 MEN	+ 13 =	11 Lamat	+ 13 =	11 Imix	+ 13 =	11 Ix	+ 13 =	11 Manik'	+ 13 =
11 Ahaw -- complete cycle									

### General Commentary

The final day of the visible column, Men, was written as Eb in error. Much of Almanac 36's text has been destroyed. In three of the five t'ols the glyph *yatan* can be seen. While no augural outcome glyphs remain readable, the content of the images suggest the prognostications. Interestingly, every "eleven" day of a 260-day period is represented in this almanac's computations. The prognostications, therefore, concern only "eleven" days. All four year bearers occur in T'ol 3.

#### T'ol 1 11..Ben, Etz'nab, Ak'bal, Lamat

Prognostication: Glyph blocks A1-B2, outcome is uncertain.

Image: The Moon Goddess sits in front of a standing, vulture headed being.

Commentary: Elsewhere in the first twenty three pages, the vulture headed being is consistently connected with negative prognostications.

**T'ol 2** days: 11..Kimi, Chuwen, Kib, Imix

Prognostication: Glyph blocks C1-D2, outcome is uncertain.

Image: The Moon Goddess sits with a tiny God H in her lap.

Commentary: Thompson believed this image, as well as the next three, relates to the Moon Goddesses' role as the Goddess of Child Birth (1972:53).

**T'ol 3** days: 11..Kawak, K'an, Muluk, Ix

Prognostication: Glyph blocks E1-F2, outcome is uncertain, text destroyed.

Image: The Moon Goddess sits with a tiny figure in her lap. The tiny figure has a *mu* glyph as a head (the *mu* commonly found in the glyphic compound *muk*) and wears death symbolism jewelry. Clearly negative content.

**T'ol 4** days: 11..Eb, Kaban, Ik', Manik'

Prognostication: Glyph blocks G1-H2, outcome is uncertain, text destroyed.

Image: The Moon Goddess sits, ornament in her nose, holding a tiny Death God (God A) in her lap.

Commentary: The Death God is always associated with negative prognostications.

**T'ol 5** days: 11..Ahaw, Chikchan, Ok, Men

Prognostication: Glyph blocks I1-J2, outcome is uncertain, text destroyed.

Image: The Moon Goddess sits with a tiny Itzamna in her lap.

Commentary: Elsewhere in the first twenty three pages, Itzamna is consistently associated with positive prognostications.

Figure 37. Almanac 37



**Day Computations:** 10x26=260 day cycle

<u>T'ol 6</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	
7 AHAW	+ 3 = 10 Ak'bal	+ 2 = 12 Chikchan	+ 7 =
7 KIMI	+ 3 = 10 Muluk	+ 2 = 12 Chuwen	+ 7 =
7 EB	+ 3 = 10 Men	+ 2 = 12 Kaban	+ 7 =
7 ETZ'NAB	+ 3 = 10 Imix	+ 2 = 12 Ak'bal	+ 7 =
7 K'AN	+ 3 = 10 Manik'	+ 2 = 12 Muluk	+ 7 =
7 OK	+ 3 = 10 Ben	+ 2 = 12 Men	+ 7 =
7 KIB	+ 3 = 10 Kawak	+ 2 = 12 Imix	+ 7 =
7 IK'	+ 3 = 10 Chikchan	+ 2 = 12 Manik'	+ 7 =
7 LAMAT	+ 3 = 10 Chuwen	+ 2 = 12 Ben	+ 7 =
7 IX	+ 3 = 10 Kaban	+ 2 = 12 Kawak	+ 7 =
7 Ahaw -- complete cycle			

<u>T'ol 3</u>	<u>T'ol 4</u>	<u>T'ol 5</u>	
6 Eb	+ 9 = 2 Imix	+ 3 = 5 K'an	+ 2 =
6 Etz'nab	+ 9 = 2 Manik'	+ 3 = 5 Ok	+ 2 =
6 K'an	+ 9 = 2 Ben	+ 3 = 5 Kib	+ 2 =
6 Ok	+ 9 = 2 Kawak	+ 3 = 5 Ik'	+ 2 =
6 Kib	+ 9 = 2 Chikchan	+ 3 = 5 Lamat	+ 2 =

6 Ik' + 9 = 2 Chuwen + 3 = 5 Ix + 2 =  
 6 Lamat + 9 = 2 Kaban + 3 = 5 Ahaw + 2 =  
 6 Ix + 9 = 2 Ak'bal + 3 = 5 Kimi + 2 =  
 6 Ahaw + 9 = 2 Muluk + 3 = 5 Eb + 2 =  
 6 Kimi + 9 = 2 Men + 3 = 5 Etz'nab + 2 =

### General Commentary

Over half the text of this almanac has been destroyed. Though only portrayed once, the Moon Goddess is the written subject of all six t'ols. Each t'ol, save T'ol 6, includes the glyph *yatan* prefixed with *winal* and a number. T'ol 6 substitutes *lob* for *yatan* and does not include a number. Forstemann hypothesized that the numbers work to total 18 winals, the number of months in a 360-day year (1906:94). He failed, however, to include the number two from the first t'ol, making the count 20, not 18.

**T'ol 1** days: 10..Ak'bal, Muluk, Men, Imix, Manik', Ben, Kawak, Chikchan, Chuwen, Kaban

Prognostication: Glyph blocks A1-B3, outcome is negative, *nuk men*.

Image: The Moon Goddess sits, hand outstretched.

**T'ol 2** days: 12..Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men, Imix, Manik', Ben, Kawak

Prognostication: Glyph blocks C1-C4, outcome is unclear, text destroyed.

Image: None.

**T'ol 3** days: 6..Eb, Etz'nab, K'an, Ok, Kib, Ik', Lamat, Ix, Ahaw, Kimi

Prognostication: Glyph blocks D1-D4, outcome is positive, *k'aa ha' wah*.

Image: None.

**T'ol 4** days: 2..Imix, Manik', Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men

Prognostication: Glyph blocks E1-E4, outcome is positive, *ahaw le*.

Image: None.

**T'ol 5** days: 5..K'an, Ok, Kib, Ik', Lamat, Ix, Ahaw, Kimi, Eb, Etz'nab

Prognostication: Glyph blocks F1-F4, outcome is negative, *u muk*.

Image: None.

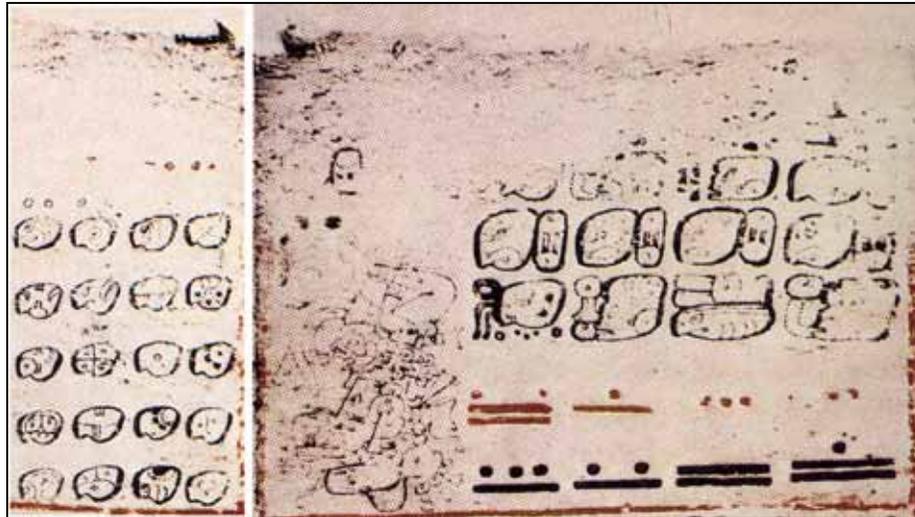
**T'ol 6** days: 7..Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib, Ik', Lamat, Ix

Prognostication: Glyph blocks G1-G4, outcome is negative, *lob*.

Image: None.

Commentary: Glyph block G3 reads *ah tuch*, possibly meaning "he of the navel". The same glyph is found in Almanac 3, T'ol 1.

Figure 38. Almanac 38



**Day Computations:** 20x39=780 day cycle (Triple Tzolk'in or Mars synodic period)

<u>T'ol 5</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	<u>T'ol 4</u>	
2 ETZ'NAB	+ 2 = 4 Ahaw	+ 8 = 12 Lamat	+ 7 = 6 Men	+ 10 = 3 Chikchan	+ 12 =
2 KABAN	+ 2 = 4 Kawak	+ 8 = 12 Manik'	+ 7 = 6 Ix	+ 10 = 3 K'an	+ 12 =
2 KIB	+ 2 = 4 Etz'nab	+ 8 = 12 Kimi	+ 7 = 6 Ben	+ 10 = 3 Ak'bal	+ 12 =
2 MEN	+ 2 = 4 Kaban	+ 8 = 12 Chikchan	+ 7 = 6 Eb	+ 10 = 3 Ik'	+ 12 =
2 IX	+ 2 = 4 Kib	+ 8 = 12 K'an	+ 7 = 6 Chuwen	+ 10 = 3 Imix	+ 12 =
2 BEN	+ 2 = 4 Men	+ 8 = 12 Ak'bal	+ 7 = 6 Ok	+ 10 = 3 Ahaw	+ 12 =
2 EB	+ 2 = 4 Ix	+ 8 = 12 Ik'	+ 7 = 6 Muluk	+ 10 = 3 Kawak	+ 12 =
2 CHUWEN	+ 2 = 4 Ben	+ 8 = 12 Imix	+ 7 = 6 Lamat	+ 10 = 3 Etz'nab	+ 12 =
2 OK	+ 2 = 4 Eb	+ 8 = 12 Ahaw	+ 7 = 6 Manik'	+ 10 = 3 Kaban	+ 12 =
2 MULUK	+ 2 = 4 Chuwen	+ 8 = 12 Kawak	+ 7 = 6 Kimi	+ 10 = 3 Kib	+ 12 =
2 LAMAT	+ 2 = 4 Ok	+ 8 = 12 Etz'nab	+ 7 = 6 Chikchan	+ 10 = 3 Men	+ 12 =
2 MANIK'	+ 2 = 4 Muluk	+ 8 = 12 Kaban	+ 7 = 6 K'an	+ 10 = 3 Ix	+ 12 =
2 KIMI	+ 2 = 4 Lamat	+ 8 = 12 Kib	+ 7 = 6 Ak'bal	+ 10 = 3 Ben	+ 12 =
2 CHIKCHAN	+ 2 = 4 Manik'	+ 8 = 12 Men	+ 7 = 6 Ik'	+ 10 = 3 Eb	+ 12 =
2 K'AN	+ 2 = 4 Kimi	+ 8 = 12 Ix	+ 7 = 6 Imix	+ 10 = 3 Chuwen	+ 12 =
2 AK'BAL	+ 2 = 4 Chikchan	+ 8 = 12 Ben	+ 7 = 6 Ahaw	+ 10 = 3 Ok	+ 12 =
2 IK'	+ 2 = 4 K'an	+ 8 = 12 Eb	+ 7 = 6 Kawak	+ 10 = 3 Muluk	+ 12 =
2 IMIX	+ 2 = 4 Ak'bal	+ 8 = 12 Chuwen	+ 7 = 6 Etz'nab	+ 10 = 3 Lamat	+ 12 =
2 AHAW	+ 2 = 4 Ik'	+ 8 = 12 Ok	+ 7 = 6 Kaban	+ 10 = 3 Manik'	+ 12 =
2 KAWAK	+ 2 = 4 Imix	+ 8 = 12 Muluk	+ 7 = 6 Kib	+ 10 = 3 Kimi	+ 12 =
2 Etz'nab	-- complete cycle				

### General Commentary

The number of days in this cycle, 780, is 3x260, a triple almanac. It is also the number of days in the Mars cycle. All twenty day names, in their regular (Imix=1, Ahaw=20) order, appear in each t'ol. A glyph reading *ch'ok* also appears in each t'ol. *Ch'ok* means "sprout" or "child".

**T'ol 1** days: 4..all twenty day names

Prognostication: Glyph blocks A1-B2, outcome is uncertain, destroyed text.

Image: The Maize God descends, *wah* glyph in hand.

**T'ol 2** days: 12..all twenty day names

Prognostication: Glyph blocks C1-C4, outcome is negative, *an kimil*.

Image: None.

**T'ol 3** days: 6..all twenty day names

Prognostication: Glyph blocks C1-C4, outcome is neutral(?), the name of God H.

Image: None.

Commentary: The name of God C is also mentioned in the text.

**T'ol 4** days: 3..all twenty day names

Prognostication: Glyph blocks D1-D4, outcome is negative, *nuk men*.

Image: None.

Commentary: The name of God Q is mentioned in the text.

**T'ol 5** days: 2..all twenty day names

Prognostication: Glyph blocks E1-E4, outcome is positive(?), name of God C.

Image: None.

Commentary: The name of Chak is also mentioned in the text.

Figure 39. Almanac 39



**Day Computations:**  $5 \times 52 = 260$  day cycle (no starting numeric coefficient)

<u>T'ol 4</u>		<u>T'ol 1</u>		<u>T'ol 2</u>		<u>T'ol 3</u>	
13 MULUK	+ 13 = 13 Ik'		+ 4 = 4 Kimi		+ 20 = 11 Kimi		+ 15 =
13 IMIX	+ 13 = 13 Ix		+ 4 = 4 Etz'nab		+ 20 = 11 Etz'nab		+ 15 =
13 BEN	+ 13 = 13 Kimi		+ 4 = 4 Ok		+ 20 = 11 Ok		+ 15 =
13 CHIKCHAN	+ 13 = 13 Etz'nab		+ 4 = 4 Ik'		+ 20 = 11 Ik'		+ 15 =
13 KABAN	+ 13 = 13 Ok		+ 4 = 4 Ix		+ 20 = 11 Ix		+ 15 =
13 Muluk -- complete cycle							

### General Commentary

Each t'ol of Almanac 39 contain the two of the same glyphs. The first is *u kuch*, "her burden", and the second is the name glyph of the Moon Goddess. "Her burdens", various deities, are named in the first glyph block of each t'ol and included in the associated images of the first two t'ols.

**T'ol 1** days: 13..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le*.

Image: The Moon Goddess, holding a *wah* glyph, carries Chak on her back.

**T'ol 2** days: 4..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil*.

Image: The Moon Goddess, holding a *wah* glyph, carries the Death God on her back.

**T'ol 3** days: 11..Kimi, Etz'nab, Ok, Ik', Ix

Prognostication: Glyph blocks E1-E4, outcome is positive, *ahawlii*.

Image: None.

Commentary: Itzamna is the subject of the passage.

**T'ol 4** days: 13..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks F1-F4, outcome is negative, *nuk men*.

Image: None.

Commentary: God Q is the subject of the passage.

Figure 40. Almanac 40



**Day Computations:** 5x52=260 day cycle

<u>T'ol 6</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	
13 EB	+ 11 = 11 Ak'bal	+ 7 = 5 Ok	+ 6 =
13 K'AN	+ 11 = 11 Men	+ 7 = 5 Ik'	+ 6 =
13 KIB	+ 11 = 11 Manik'	+ 7 = 5 Ix	+ 6 =
13 LAMAT	+ 11 = 11 Kawak	+ 7 = 5 Kimi	+ 6 =
13 AHAW	+ 11 = 11 Chuwen	+ 7 = 5 Etz'nab	+ 6 =
13 Eb -- complete cycle			

<u>T'ol 3</u>	<u>T'ol 4</u>	<u>T'ol 5</u>	
11 Kib	+ 16 = 1 Eb	+ 8 = 9 Ahaw	+ 4 =
11 Lamat	+ 16 = 1 K'an	+ 8 = 9 Eb	+ 4 =
11 Ahaw	+ 16 = 1 Kib	+ 8 = 9 K'an	+ 4 =
11 Eb	+ 16 = 1 Lamat	+ 8 = 9 Kib	+ 4 =
11 K'an	+ 16 = 1 Ahaw	+ 8 = 9 Lamat	+ 4 =

**General Commentary**

The second and third glyph in each of the six t'ols of Almanac 40 are the same. The second is the name of the Moon Goddess. The first repeating glyph appears to read *u mut*, commonly translated “his account” (Barrera 1980:542). Thompson believed the glyph to signify disease and identified the entire almanac as a “medical

divinatory” (1972:54). A review of *mut* in the Cordemex presents an interesting alternative reading. *Mut*, in both Yukatek (Barrera 1980:542) and Ch’ol (Aulie and Aulie 1978:82), means “pheasant”, “chicken”, or, more generally, “bird”. The reading “ his/her bird” fits well the subjects of this almanac. The majority of the creatures named in the t’ol texts are, in fact, birds. In Yucatan, the sighting of certain birds is used by some shamans as a method of prognostication. The other close by almanac including a series of birds, Almanac 47, also includes the *u mut* glyph. Examples of the Death God, Itzamna, and a monkey being connected with *u mut* seem to contradict this reading.

**T’ol 1** days: 11..Ak’bal, Men, Manik’, Kawak, Chuwen

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le*.

Image: The Moon Goddess sits with a bird on her back.

Commentary: The bird is named in glyph block A1, probably *yaxun*, but spelled *yaxul*.

**T’ol 2** days: 5..Ok, Ik’, Ix, Kimi, Etz’nab

Prognostication: Glyph blocks C1-C4, outcome is positive, *ahaw le*.

Image: None.

Commentary: Glyph block C1 names *ma’ax*, meaning “monkey”, as the subject linked to the Moon Goddess.

**T’ol 3** days: 11..Kib, Lamat, Ahaw, Eb, K’an

Prognostication: Glyph blocks D1-D4, outcome is positive, *ox wil*.

Image: None.

Commentary: Glyph block D1 names *tz’ul*, meaning “dog”, as the subject linked to the Moon Goddess.

**T’ol 4** days: 1..Eb, K’an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks E1-F2, outcome is negative, *an kimil*.

Image: The Moon Goddess sits with a tiny Death God (God A) on her back.

**T’ol 5** days: 9..Ahaw, Eb, K’an, Kib, Lamat

Prognostication: Glyph blocks G1-H2, outcome is positive, *ahaw lil*.

Image: The Moon Goddess sits, a *sak* glyph balanced on her head.

Commentary: Glyph block G1 names Itzamna as the subject linked to the Moon Goddess.

**T’ol 6** days: 13..Eb, K’an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks I1-J2, outcome is negative, *u muk*.

Image: The Moon Goddess sits with a Muan bird on her back.

Commentary: Oxlahun Muan (*kuy*) is named as the subject linked to the Moon Goddess.

Figure 41. Almanac 41



**Day Computations:** 5x52=260 day cycle

<u>T'ol 2</u>		<u>T'ol 1</u>	
10 IK'	+ 29 =	13 Chuwen	+ 23 =
10 IX	+ 29 =	13 Ak'bal	+ 23 =
10 KIMI	+ 29 =	13 Men	+ 23 =
10 ETZ'NAB	+ 29 =	13 Manik'	+ 23 =
10 OK	+ 29 =	13 Kawak	+ 23 =
10 Ik'	-- complete cycle		

**General Commentary**

Both of the t'ols in Almanac 41 contain the same glyphic passage, save the augural outcome glyphs. The first glyph block reads *yatan*, "wife of" or "her offering". "Wife of" fits better in this context. The second and third glyphs are the two versions of the Moon Goddesses' name. The associated images portray deities who are not mentioned in the text.

**T'ol 1** days: 13..Chuwen, Ak'bal, Men, Manik', Kawak

Prognostication: Glyph blocks A1-B2, outcome is positive, *ox wil*.

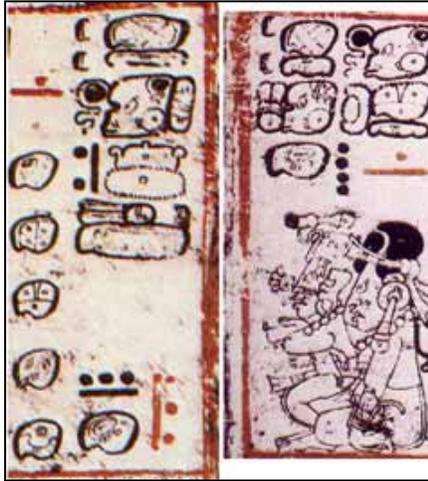
Image: The Moon Goddess sits, erotically entwined with God H.

**T'ol 2** days: 10..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil*.

Image: The Moon Goddess, eyes closed, sits facing the Death God (God A).

Figure 42. Almanac 42



**Day Computations:** 5x52=260 day cycle

T'ol 2

T'ol 1

6 KIB + 28 = 8 K'an + 24 =

6 LAMAT + 28 = 8 Kib + 24 =

6 AHAW + 28 = 8 Lamat + 24 =

6 EB + 28 = 8 Ahaw + 24 =

6 K'AN + 28 = 8 Eb + 24 =

6 Kib -- complete cycle

**General Commentary**

The first two glyphs of each t'ol are the same. The first is *yatan*, probably “her payment/offering” in this context. The second is the name of the Moon Goddess.

**T'ol 1** days: 8..K'an, Kib, Lamat, Ahaw, Eb

Prognostication: Glyph blocks A1-A4, outcome is negative *nuk men*.

Image: None.

Commentary: Glyph block A3 is a word meaning “armadillo”.

**T'ol 2** days: 6..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks C1-D2, outcome is positive, *ahawli*.

Image: The Moon Goddess sits with a tiny God H in her lap.

Commentary: The two names of the Moon Goddess appear in the text. The name of God H is not included.

Figure 43. Almanac 43



**Day Computations:** 5x52=260 day cycle

<u>T'ol 3</u>	<u>T'ol 1</u>	<u>T'ol 2</u>
2 KAWAK + 20 = 9 Kawak	+ 19 = 2 Etz'nab	+ 13 =
2 CHUWEN + 20 = 9 Chuwen	+ 19 = 2 Ok	+ 13 =
2 AK'BAL + 20 = 9 Ak'bal	+ 19 = 2 Ik'	+ 13 =
2 MEN + 20 = 9 Men	+ 19 = 2 Ix	+ 13 =
2 MANIK' + 20 = 9 Manik'	+ 19 = 2 Kimi	+ 13 =
2 Kawak -- complete cycle		

**General Commentary**

Each of the three t'ol texts includes a glyph which reads *ch'ok*, meaning “sprout” or “young child” (Barrera 1980:139). In T'ol 1, the glyph reads *ch'ok ahaw*, possibly meaning “young lord”. The last two t'ols begin with a glyph which may read *emel* (Schele et al. 1994). *Emel* translates “to descend” (Barrera 1980:153). The Moon Goddess is not mentioned.

**T'ol 1** days: 9..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks A1-B2, outcome is positive, *ch'ok ahaw*.

Image: Zimmermann's God U squats on a mat.

Commentary: Glyph block A1 contains a glyph connected to the 5-day month Wayeb. Thompson suggested that it may stand for “nagual” (1972:56).

**T'ol 2** days: 2..Etz'nab, Ok, Ik', Ix, Kimi

Prognostication: Glyph blocks C1-C4, outcome is positive, *ahawlii*.

Image: None.

Commentary: Itzamna is named in the passage.

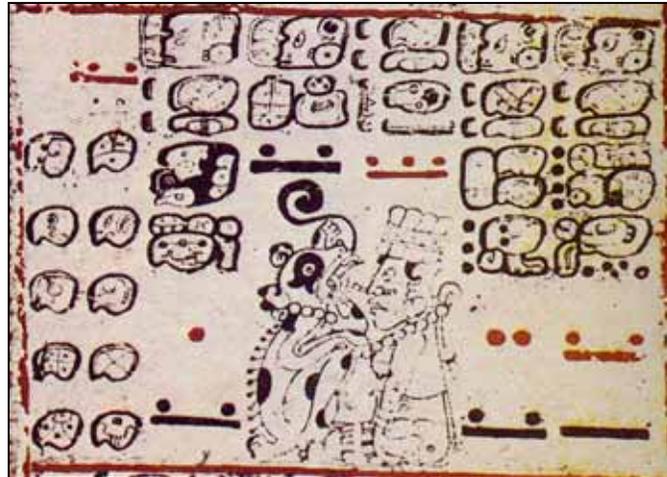
**T'ol 3** days: 2..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks D1-D4, outcome is negative, *an kimil*.

Image: None.

Commentary: The Death God is named in the passage.

Figure 44. Almanac 44



**Day Computations:** 10x26=260 day cycle

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	
7 AHAW	+ 7 = 1 Manik'	+ 7 = 8 Ix	+ 7 = 2 Imix	+ 5 =
7 KIMI	+ 7 = 1 Ben	+ 7 = 8 Ahaw	+ 7 = 2 Manik'	+ 5 =
7 EB	+ 7 = 1 Kawak	+ 7 = 8 Kimi	+ 7 = 2 Ben	+ 5 =
7 ETZ'NAB	+ 7 = 1 Chikchan	+ 7 = 8 Eb	+ 7 = 2 Kawak	+ 5 =
7 K'AN	+ 7 = 1 Chuwen	+ 7 = 8 Etz'nab	+ 7 = 2 Chikchan	+ 5 =
7 OK	+ 7 = 1 Kaban	+ 7 = 8 K'an	+ 7 = 2 Chuwen	+ 5 =
7 KIB	+ 7 = 1 Ak'bal	+ 7 = 8 Ok	+ 7 = 2 Kaban	+ 5 =
7 IK'	+ 7 = 1 Muluk	+ 7 = 8 Kib	+ 7 = 2 Ak'bal	+ 5 =
7 LAMAT	+ 7 = 1 Men	+ 7 = 8 Ik'	+ 7 = 2 Muluk	+ 5 =
7 IX	+ 7 = 1 Imix	+ 7 = 8 Lamat	+ 7 = 2 Men	+ 5 =
7 Ahaw -- complete cycle				

**General Commentary**

Each of the four t'ols of Almanac 44 begins with the same two glyphs. The first is the name of the Moon Goddess. The second repeating glyph is *yatan*, "wife of" or "her offering" (see Almanac 3 commentary for background). Animals are the subjects associated with the goddess.

**T'ol 1** days: 1..Manik', Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men, Imix

Prognostication: Glyph blocks A1-A4, outcome is positive, *ahaw le*.

Image: None.

Commentary: God L is mentioned in the text.

**T'ol 2** days: 8..Ix, Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib, Ik', Lamat

Prognostication: Glyph blocks B1-C2, outcome is negative, *u muk*.

Image: The Moon Goddess sits facing a dog.

Commentary: *Tz'ul*, meaning "dog" (Knorozov 1952:17) appears in glyph block B2.

**T'ol 3** days: 2..Imix, Manik', Ben, Kawak, Chikchan, Chuwen, Kaban, Ak'bal, Muluk, Men

Prognostication: Glyph blocks D1-D4, outcome is positive, *ox wil*.

Image: None.

Commentary: The name of an animal or deity appears in glyph block D3, it may read *i bak*.

**T'ol 4** days: 7..Ahaw, Kimi, Eb, Etz'nab, K'an, Ok, Kib, Ik', Lamat, Ix

Prognostication: Glyph blocks E1-E4, outcome is negative, *an kimil*.

Image: None.

Commentary: The name glyph of the deer, also found in Almanac 31, appears in E3.

Figure 45. Almanac 45



**Day Computations:** 5x52=260 day cycle

<u>T'ol 4</u>		<u>T'ol 1</u>		<u>T'ol 2</u>		<u>T'ol 3</u>	
3 AK'BAL	+ 13 =	3 Kib	+ 13 =	3 Muluk	+ 13 =	3 Ik'	+ 13 =
3 MEN	+ 13 =	3 Lamat	+ 13 =	3 Imix	+ 13 =	3 Ix	+ 13 =
3 MANIK'	+ 13 =	3 Ahaw	+ 13 =	3 Ben	+ 13 =	3 Kimi	+ 13 =
3 KAWAK	+ 13 =	3 Eb	+ 13 =	3 Chikchan	+ 13 =	3 Etz'nab	+ 13 =
3 CHUWEN	+ 13 =	3 K'an	+ 13 =	3 Kaban	+ 13 =	3 Ok	+ 13 =
3 Ak'bal -- complete cycle							

**General Commentary**

The four directions are represented in this almanac, one for each of the four t'ols. The order in which they are mentioned differs from the previous listing of the directions, found in Almanac 12. This almanacs move in a circular motion through the directions, starting with east. The use of the number 13 for day intervals allows every "3" day of a 260 day period to be included in the day computations. The second glyph block of each t'ol is identical. It may read *ch'oh* or *bah*. No reasonable decipherment has yet been offered.

**T'ol 1** days: 3..Kib, Lamat, Ahaw, Eb, K'an

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le*.

Image: Chak sits holding a *wah* glyph.

Commentary: East, *lak'in*, is the associated direction.

**T'ol 2** days: 3..Muluk, Imix, Ben, Chikchan, Kaban

Prognostication: Glyph blocks C1-D2, outcome is positive, *ox wil*.

Image: The Moon Goddess sits, holding a *wah* glyph.

Commentary: North, *na*, is the associated direction.

**T'ol 3** days: 3..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks E1-F2, outcome is negative, *nuk men*.

Image: The Sun God sits holding a *wah* glyph.

Commentary: West, *Chik'in*, is the associated direction. Its spelling is Ch'ol (Wald: personal communication 1995).

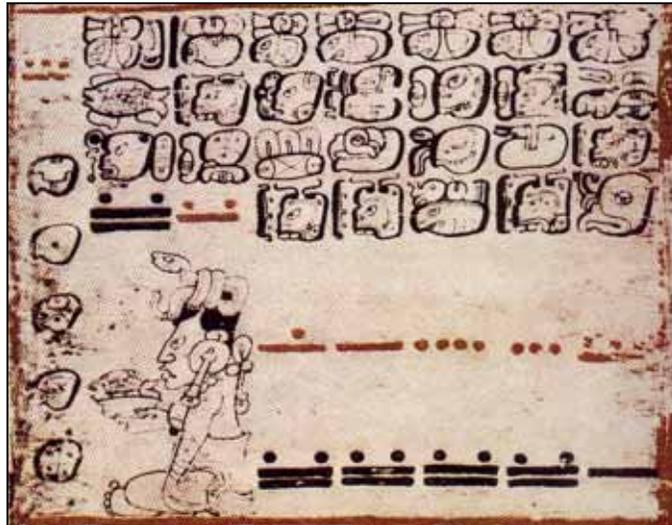
**T'ol 4** days: 3..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks G1-G5, outcome is positive, *yutzil* and *ahawwil*.

Image: None.

Commentary: South, *ma ol*, is the associated direction. The Maize God, named at G3, is the associated deity.

Figure 46. Almanac 46



**Day Computations:**  $4 \times 65 = 260$  day cycle

<u>T'ol 6</u>		<u>T'ol 1</u>		<u>T'ol 2</u>	
8 K'AN	+ 12 =	7 Kib	+ 12 =	6 Lamat	+ 12 =
8 MULUK	+ 12 =	7 Imix	+ 12 =	6 Ben	+ 12 =
8 IX	+ 12 =	7 Kimi	+ 12 =	6 Etz'nab	+ 12 =
8 KAWAK	+ 12 =	7 Chuwen	+ 12 =	6 Ak'bal	+ 12 =
8 K'an	-- complete cycle				

<u>T'ol 3</u>		<u>T'ol 4</u>		<u>T'ol 5</u>	
5 Ahaw	+ 12 =	4 Eb	+ 12 =	3 K'an	+ 5 =
5 Chikchan	+ 12 =	4 Kaban	+ 12 =	3 Muluk	+ 5 =
5 Ok	+ 12 =	4 Ik'	+ 12 =	3 Ix	+ 5 =
5 Men	+ 12 =	4 Manik'	+ 12 =	3 Kawak	+ 5 =

**General Commentary**

A Lamat day sign incorrectly ends the written day names column. Each of the six t'ols begins with the same glyph. Following the traditional reading from Classic Period inscriptions, the glyph reads *hok'*. Proskouriakoff was the first scholar to recognize this glyph as being associated with the accession of rulers (1960). As Thompson pointed out, accession does not make much sense in the context of Almanac 46. The definition of *hok'*, however, is more broad than generally assumed. The Cordemex lists "to grasp, to seize, to fish, to bind, to

lasso, and to hook” as various definitions of *hok’* (1980:221). “To hook” and “to fish” make good sense with the only image of the almanac. “To lasso” and “to bind” are notably reminiscent of the glyph itself. This may be evidence of Maya’s love of punning. A second repeating glyph, occurring in all t’ols save T’ol 4, has been suggested to read *u sih*, “her gift” (Schele et al. 1994, Barrera 1980:725). Thompson suggested it reads *u hanal*, “his or her eating” (1972:61).

**T’ol 1** days: 7..Kib, Imix, Kimi, Chuwen

Prognostication: Glyph blocks A1-B3, outcome is positive, *ahawliil*.

Image: The Moon Goddess sits holding out a fish and wearing a snake headdress.

Commentary: God N, Ho Pawatun, is named in glyph block B1.

**T’ol 2** days: 6..Lamat, Ben, Etz’nab, Ak’bal

Prognostication: Glyph blocks C1-C4, outcome is uncertain, *tok’* (flint).

Image: None.

Commentary: The name of God CH, Xbalanque appears in glyph block C2.

**T’ol 3** days: 5..Ahaw, Chikchan, Ok, Men

Prognostication: Glyph blocks D1-D4, outcome is uncertain, translation uncertain.

Image: None.

Commentary: K’awil is named in glyph block D2.

**T’ol 4** days: 4..Eb, Kaban, Ik’, Manik’

Prognostication: Glyph blocks E1-E4, outcome is negative, *an kimil* and *nuk men*.

Image: None.

Commentary: The death God is named in glyph block E2.

**T’ol 5** days: 3..K’an, Muluk, Ix, Kawak

Prognostication: Glyph blocks F1-F4, outcome is uncertain, a deer haunch?

Image: None.

Commentary: The Maize God is named in glyph block F2.

**T’ol 6** days: 8..K’an, Muluk, Ix, Kawak

Prognostication: Glyph blocks G1-G4, outcome is uncertain, maybe positive, *k’aa ha’ wah*.

Image: None.

Commentary: The confusion of identifying the outcome here sprouts from the opposition of the positive phrase *k’aa ha’ wah* and the negative presence of the vulture being (glyph block G4).

Figure 47. Almanac 47



**Day Computations:**  $4 \times 65 = 260$  day cycle (no starting numeric coefficient)

<u>T'ol 6</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	
MULUK + 8 = Kaban	+ 13 = Ok	+ 13 =	
IX + 8 = Ik'	+ 13 = Men	+ 13 =	
KAWAK + 8 = Manik'	+ 13 = Ahaw	+ 13 =	
K'AN + 8 = Eb	+ 13 = Chikchan	+ 13 =	

Muluk -- complete cycle

<u>T'ol 3</u>	<u>T'ol 4</u>	<u>T'ol 5</u>	
Ak'bal + 13 = Kib	+ 8 = K'an	+ 10 =	
Lamat + 13 = Imix	+ 8 = Muluk	+ 10 =	
Ben + 13 = Kimi	+ 8 = Ix	+ 10 =	
Etz'nab + 13 = Chuwen	+ 8 = Kawak	+ 10 =	

**General Commentary**

The final day interval must be changed from 12 to 10 in order to arrive at 65 days. The content of this almanac is similar to that of Almanac 40. Thompson considered both almanacs “medical divinatory”. Each of the six t’ols begins with the same three glyphs. The third is the name of the Moon Goddess. The first is consistently the name glyph of various kinds of birds. The second repeating glyph is read *u mut*. As explained in the general

commentary of Almanac 40, one definition of *mut* is “bird”. Both the glyphs and the associated images of Almanac 47 encourage that interpretation. “His or her account” is the standard interpretation of *u mut* (Barrera 1980:542).

**T’ol 1** days: X..Kaban, Ik’, Manik’, Eb

Prognostication: Glyph blocks A1-B2, outcome is negative, *u muk*.

Image: The Moon Goddess sits with the Muan bird on her shoulders.

Commentary: Glyph block A1 names the bird, *oxlahun muan*.

**T’ol 2** days: X..Ok, Men, Ahaw, Chikchan

Prognostication: Glyph blocks C1-D2, outcome is positive, *ox ok wah*.

Image: The Moon Goddess sits with a Quetzal bird on her shoulders.

Commentary: Glyph C1 names the bird, *kuk*, meaning “quetzal” (Barrera 1980:420). The glyph block position that reads *u mut* in all the other t’ols reads *u muk* here. The outcome is clearly positive, and therefore, two main explanations present themselves. One possibility is that the scribe mis-wrote the *ti* glyph as a *ka*. The other possibility is that this is indeed *u muk* but defined in a secondary, positive, meaning. “His news” has been suggested (Schele et. al 1994, Barrera 1980:534).

**T’ol 3** days: X..Ak’bal, Lamat, Ben, Etz’nab

Prognostication: Glyph blocks E1-F2, outcome is negative, *u muk*.

Image: The Moon Goddess sits with a Macaw on her shoulders.

Commentary: Glyph E1 names the bird, *moo*, meaning “macaw” (Barrera 1980:525).

**T’ol 4** days: X..Kib, Imix, Kimi, Chuwen

Prognostication: Glyph blocks G1-G4, outcome is positive, *ahaw le*.

Image: None.

Commentary: Glyph block G1 names the bird, *yaxun*.

**T’ol 5** days: X..K’an, Muluk, Ix, Kawak

Prognostication: Glyph blocks H1-H4, outcome is negative, *nuk men*.

Image: None.

Commentary: Glyph block H1 names the bird, the vulture.

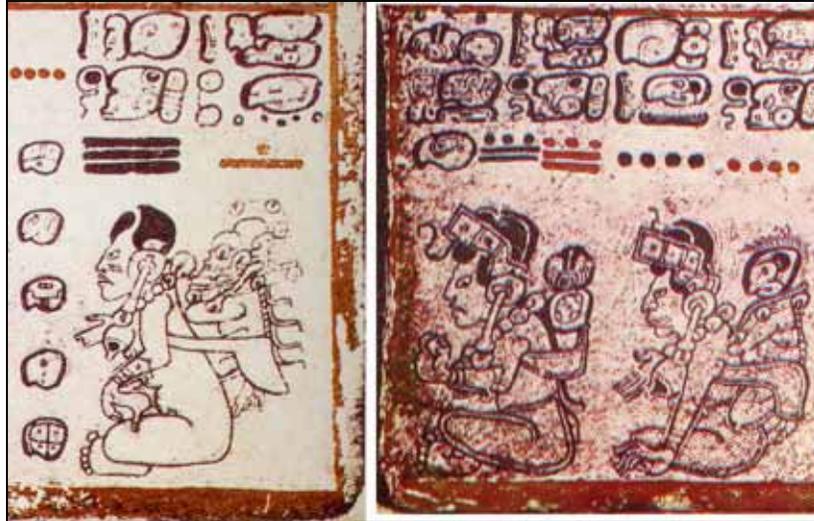
**T’ol 6** days: X..Muluk, Ix, Kawak, K’an

Prognostication: Glyph blocks I1-I4, outcome is positive, *k’aa ha’ wah*.

Image: None.

Commentary: Glyph I1 names the bird, *kutz’*, meaning “turkey” (Barrera 1980:355).

Figure 48. Almanac 48



**Day Computations:** 5x52=260 day cycle

<u>T'ol 3</u>		<u>T'ol 1</u>		<u>T'ol 2</u>	
4 AHAW	+ 15 = 6 Men	+ 33 = 13 Lamat	+ 4 =		
4 EB	+ 15 = 6 Manik'	+ 33 = 13 Ahaw	+ 4 =		
4 K'AN	+ 15 = 6 Kawak	+ 33 = 13 Eb	+ 4 =		
4 KIB	+ 15 = 6 Chuwen	+ 33 = 13 K'an	+ 4 =		
4 LAMAT	+ 15 = 6 Ak'bal	+ 33 = 13 Kib	+ 4 =		
4 Ahaw	-- complete cycle				

**General Commentary**

Each of the texts of the three t'ols include the name of the Moon Goddess, an associated deity's name, and the *u kuch* glyph, meaning "his or her burden". The images, as with other almanacs containing the *u kuch* glyph, show the Moon Goddess with various burdens on her back. Thompson noted that this is the first of three almanacs that begin with the day name Ahaw.

**T'ol 1** days: 6..Men, Manik', Kawak, Chuwen, Ak'bal

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil*.

Image: The Moon Goddess sits with a tiny Death God on her back.

**T'ol 2** days: 13..Lamat, Ahaw, Eb, K'an, Kib

Prognostication: Glyph blocks C1-D2, outcome is positive, *yax k'an*.

Image: The Moon Goddess sits with the glyphic compound *yax k'an* on her back.

Commentary: The name of Itzamna appears in glyph block C2, supporting evidence of the positive augural outcome.

**T'ol 3** days: 4..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks E1-F2, outcome is negative, *u muk*.

Image: The Moon Goddess sits with a *mu* glyph-headed being on her back.

Commentary: The *mu* glyph-headed being is named *muy* in glyph block E1.

ALMANAC 49, PAGES 18c-19c

Figure 49. Almanac 49



**Day Computations:** 5x52=260 day cycle

T'ol 2

T'ol 1

13 AHAW + 32 = 6 Eb + 20 =

13 EB + 32 = 6 K'an + 20 =

13 K'AN + 32 = 6 Kib + 20 =

13 KIB + 32 = 6 Lamat + 20 =

13 LAMAT + 32 = 6 Ahaw + 20 =

13 Ahaw -- complete cycle

**General Commentary**

The second glyph in each t'ol is the familiar *u kuch*, "her burden".

**T'ol 1** days: 6..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil*.

Image: The Moon Goddess sits with a skull in a bag on her back.

Commentary: The first glyph of the passage, A1, appears to read *sak chak kimi*, "white red death"?

Whatever it reads, it is the object of the goddesses' burden.

**T'ol 2** days: 13..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph block C1-D2, outcome is positive, *k'aa ha' wah*.

Image: The Moon Goddess sits with a *yax k'an* glyphic compound on her back.

Commentary: The name of the Maize God appears in glyph block C1.

Figure 50. Almanac 50



**Day Computations:** 5x52=260 day cycle

<u>T'ol 5</u>		<u>T'ol 1</u>		<u>T'ol 2</u>	
13 AHAW	+ 11 = 11	Chuwen	+ 11 = 9	Ik'	+ 11 =
13 EB	+ 11 = 11	Ak'bal	+ 11 = 9	Ix	+ 11 =
13 K'AN	+ 11 = 11	Men	+ 11 = 9	Kimi	+ 11 =
13 KIB	+ 11 = 11	Manik'	+ 11 = 9	Etz'nab	+ 11 =
13 LAMAT	+ 11 = 11	Kawak	+ 11 = 9	Ok	+ 11 =
13 Ahaw -- complete cycle					

<u>T'ol 3</u>		<u>T'ol 4</u>	
7 Ben	+ 10 = 4	Ak'bal	+ 9 =
7 Chikchan	+ 10 = 4	Men	+ 9 =
7 Kaban	+ 10 = 4	Manik'	+ 9 =
7 Muluk	+ 10 = 4	Kawak	+ 9 =
7 Imix	+ 10 = 4	Chuwen	+ 9 =

**General Commentary**

Each of the five t'ols includes the *u kuch* glyph, “her burden”, common to the Moon Goddess pages. Thompson believed the subject of this almanac to be “the fates the Moon Goddess inflicts on man” (1972:59).

**T'ol 1** days: 11..Chuwen, Ak'bal, Men, Manik', Kawak

Prognostication: Glyph blocks A1-B2, outcome is negative, *tok' te ba*.

Image: The Moon Goddess sits with the *mu* glyph headed, death being on her back.

Commentary: God Q is named in glyph block A1 as the Moon Goddesses' burden.

**T'ol 2** days: 9..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks C1-D2, outcome is negative, *k'ak' te tun*.

Image: The Moon Goddess sits with the glyph for "fire", *k'ak'*, on her back.

Commentary: "Fire" is named in glyph block C1 as the Moon Goddesses' burden.

**T'ol 3** days: 7..Ben, Chikchan, Kaban, Muluk, Imix

Prognostication: Glyph blocks E1-F2, outcome is negative, *an kimil*.

Image: The Moon Goddess sits with the *mu* glyph headed, death being on her back.

Commentary: The Death God is named in glyph block E1 as the Moon Goddesses' burden.

**T'ol 4** days: 4..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks G1-H2, outcome is positive, *k'aa ha' wah*.

Image: The Moon Goddess sits with a tiny Maize God on her back.

Commentary: The Maize God is named in glyph block G1 as the Moon Goddesses' burden.

**T'ol 5** days: 13..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks I1-J2, outcome is positive, *ox wil*.

Image: The Moon Goddess sits with a unknown deity on her back.

Commentary: The name of the unknown deity appears in glyph block I1 and may read *sak nik*, meaning "white flower".

Figure 51. Almanac 51



**Day Computations:** 5x52=260 day cycle (no starting numeric coefficient)

<u>T'ol 4</u>	<u>T'ol 1</u>	<u>T'ol 2</u>	<u>T'ol 3</u>	
KABAN	+ 5 = Ik'	+ 21 = Ak'bal	+ 16 = Kawak	+ 10 =
MULUK	+ 5 = Ix	+ 21 = Men	+ 16 = Chuwen	+ 10 =
IMIX	+ 5 = Kimi	+ 21 = Manik'	+ 16 = Ak'bal	+ 10 =
BEN	+ 5 = Etz'nab	+ 21 = Kawak	+ 16 = Men	+ 10 =
CHIKCHAN	+ 5 = Ok	+ 21 = Chuwen	+ 16 = Manik'	+ 10 =

Kaban -- complete cycle

**General Commentary**

Each of the four t'ols begin with the same glyph, *yatan*, probably “wife of” in this context.

**T'ol 1** days: X..Ik', Ix, Kimi, Etz'nab, Ok

Prognostication: Glyph blocks A1-B2, outcome is positive, *ahaw le*.

Image: The Moon Goddess crouches, erotically entwined with Ho Pawatun.

**T'ol 2** days: X..Ak'bal, Men, Manik', Kawak, Chuwen

Prognostication: Glyph blocks C1-D2, outcome is negative, *lob*.

Image: The Moon Goddess sits facing God CH, Xbalanque.

**T'ol 3** days: X..Kawak, Chuwen, Ak'bal, Men, Manik'

Prognostication: Glyph blocks E1-F2, outcome is positive, *ox wil* and *ahawtil*.

Image: The Moon Goddess sits facing K'an Pawatun.

Commentary: The Moon Goddess is not mentioned in the passage.

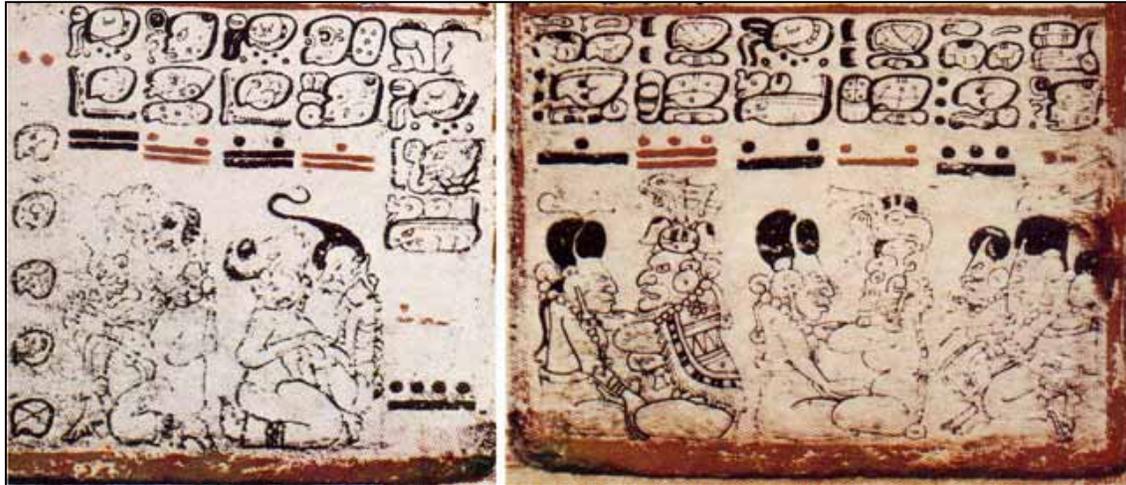
**T'ol 4** days: X..Kaban, Muluk, Imix, Ben, Chikchan

Prognostication: Glyph blocks G1-G4, outcome is negative, *an kimil*.

Image: None.

Commentary: God Q is named in glyph block G2.

Figure 52. Almanac 52



**Day Computations:** 5x52=260 day cycle

<u>T'ol 6</u>		<u>T'ol 1</u>		<u>T'ol 2</u>	
2 OK	+ 10 = 12	Ahaw	+ 12 = 11	Eb	+ 9 =
2 IK'	+ 10 = 12	Eb	+ 12 = 11	K'an	+ 9 =
2 IX	+ 10 = 12	K'an	+ 12 = 11	Kib	+ 9 =
2 KIMI	+ 10 = 12	Kib	+ 12 = 11	Lamat	+ 9 =
2 ETZ'NAB	+ 10 = 12	Lamat	+ 12 = 11	Ahaw	+ 9 =
2 Ok -- complete cycle					

<u>T'ol 3</u>		<u>T'ol 4</u>		<u>T'ol 5</u>	
7 Imix	+ 6 = 13	Manik'	+ 7 = 7	Ix	+ 8 =
7 Ben	+ 6 = 13	Kawak	+ 7 = 7	Kimi	+ 8 =
7 Chikchan	+ 6 = 13	Chuwen	+ 7 = 7	Etz'nab	+ 8 =
7 Kaban	+ 6 = 13	Ak'bal	+ 7 = 7	Ok	+ 8 =
7 Muluk	+ 6 = 13	Men	+ 7 = 7	Ik'	+ 8 =

**General Commentary**

Unlike many of the other almanacs in the Moon Goddess Pages, this final almanac has few glyphs that repeat in each t'ol. The name glyph of the Moon Goddess is the exception.

**T'ol 1** days: 12..Ahaw, Eb, K'an, Kib, Lamat

Prognostication: Glyph blocks A1-B2, outcome is negative, *an kimil* and *u muk*.

Image: The Moon Goddess sits with the Death God in her lap.

Commentary: The final glyph may read *xib*, generally accepted as a root of *xibalba* meaning “fear” (Stuart 1987:31). An alternative meaning of *xib* is “young male child” (Barrera 1980:914). This second translation option works well with the associated image.

**T'ol 2** days: 11..Eb, K'an, Kib, Lamat, Ahaw

Prognostication: Glyph blocks C1-D2, outcome is negative, *an kimil* and *u muk*.

Image: The Moon Goddess sits with a small death deity in her lap.

Commentary: Again, the passage ends with the glyph reading *xib*.

**T'ol 3** days: 7..Imix, Ben, Chikchan, Kaban, Muluk

Prognostication: Glyph blocks E1-E4, outcome is negative, *an kimil*, *lob*, and *nuk men*.

Image: None.

Commentary: The passage begins with a glyph which may read *em*, meaning “to descend” (Barrera 1980:153).

**T'ol 4** days: 13..Manik', Kawak, Chuwen, Ak'bal, Men

Prognostication: Glyph blocks F1-G2, outcome is positive, *k'aa ha' wah*, *ox wil*, and *ahawliil*.

Image: The Moon Goddess sits facing Ho Pawatun.

Commentary: Neither of the deities represented in the associated image are mentioned in the text.

Instead, three of the four glyphs are positive augural outcomes. The second glyph, G1, is *yatan*, probably “wife of” in this context.

**T'ol 5** days: 7..Ix, Kimi, Etz'nab, Ok, Ik'

Prognostication: Glyph blocks H1-I2, outcome is negative, *an kimil*, *nuk men*, *ma tzil*.

Image: The Moon Goddess sits facing the Death God (God A).

Commentary: As in T'ol 4, the only non-augural glyph of the passage is *yatan*, “wife of”.

**T'ol 6** days: 2..Ok, Ik', Ix, Kimi, Etz'nab

Prognostication: Glyph blocks J1-K2, outcome is positive, *k'aa ha' wah* and *ox ok wah*.

Image: The Moon Goddess sits with a tiny image of herself in her lap. She carries a child on her back as well.

Commentary: Glyph block K1 may read *yal*, “child of” (Schele et. al 1994, Barrera 1980:9).

## TWO BLANK ALMANACS, PAGES 3b and 3c

Figure 53. Missing Almanacs?



### General Commentary

These two almanacs are completely blank, save a line of five empty day name cartouches running down their left sides. In regards to these unused almanacs, Forstemann wrote “The scribe divided the lower half of page 3 into two parts, and drew in each the outline of five days; but then he saw that, to continue his work, he needed a long surface extending from left to right, and he therefore omitted filling in these two sections”. Since page 1 contains two visible by eroded almanacs, it is important to note these two. If they are counted in the total number of almanacs, there were fifty four, not the fifty two that Mayanists would prefer the total to be.

### CHAPTER 3: NUMEROLOGY

The Maya have always conceptualized time as cyclical. Individual small cycles combine to create larger cycles. For example, the small cycles of 13 and 20 days combine to form the 260 day cycle. Large cycles are combined with others to create even larger cycles. Over the last decade, researchers have demonstrated that the enormous time increments recorded in the Dresden are the lowest common multiples (LCM) shared by smaller cycles. For example, a large distance number in the Dresden's Venus Pages, long count 9.9.16.0.0, has been shown to be equally divisible by most of the important Maya astronomical and calendrical cycles (Aveni 1980:192). The distance number totals 1,366,560 days. Cycles which evenly divide into it include; the Tzolk'in (260 days), the tun (360 days), the solar year (365 days), the Venus synodic period (584 days), the Mars synodic period (780 days), the correction factor of the Venus tables (2,340 days), the Venus/solar period (2,920 days), and the Calendar Round (18,980 days or 52 years).

The important realization to be gathered from the above example is that 9.9.16.0.0, called by Lounsbury "the super number" (1978), does not track each of the planetary cycles involved in its multiples. Rather, the numbers which identify the cycles, 584 for Venus, 780 for Mars, etc., are abstracted into ritually significant numerological constants. While the numbers are derived from the observation of natural cycles, their combinations to create larger cycles of time are removed from skywatching. The Maya calendar is largely the result of a system of numerology based on intervals gathered through astronomy. As was done by the Cult of Pythagoras in ancient Greece, the Maya removed the numbers revealed by natural phenomena and investigated their mathematical patterns, searching for the underlying order of the universe. By employing a calendrical system based on astronomical cycles, the Maya created a mirror through which the days on Earth reflect the sacred order of the cosmos, as gathered from the motions of the heavens.

The Tzolk'in (260 day cycle) is enigmatic in that it appears to have no basis in celestial phenomena. Instead, the 260 day ritual calendar is said to be based on terrestrial cycles. While the debate of which cycle it reflects continues, the gestation period of a human life and the maize planting cycle are the most widely accepted explanations. The Tzolk'in is the result of 20 day names combined with 13 numeric coefficients. In the first fifty two almanacs of the Dresden, the normal order of the Tzolk'in is replaced by a system that groups the 20 day names into four groups of five and five groups of four, thus dividing a single cycle into two independent but interwoven cycles. In doing so, the Tzolk'in is transformed from the natural into the numerological.

#### GROUPS OF FOUR AND FIVE DAY NAMES

There are three types of almanacs in the first twenty three pages; almanacs beginning with four day names, almanacs beginning with five day names, and almanacs beginning with ten day names (two rows of five). Working through the math of these almanacs reveals recurrent patterns of day names. A careful survey of those patterns comes up with two definable sets; four groups of five day names and five groups of four day names. Each vertical

column of four day names will be one of five possible groups. Each vertical column of five day names will be one of four possible groups. Almanacs with ten day names at the beginning are simply combinations of two of the four groups of five. This seems to be straight forward number manipulation, 5x52 and 4x65. However, there is a deeper connection between these two groups. The four and five can be interlocked in a grid, much like those formed by the almanacs' suppressed day names, as to represent both groups and all twenty day names simultaneously. In Table 1, the groups of four are represented horizontally and the groups of five vertically. Every t'ol of days in the first fifty two almanacs, excluding Almanacs 34 and 38 (to be discussed within this chapter), is one of these nine groups.

Table 1. The Groups of Four and Five

	A	B	C	D
I	 MEN	 AHAW	 CHIKCHAN	 OK
II	 MANIK	 EB	 KABAN	 IK
III	 KAWAK	 KAN	 MULUK	 IX
IV	 CHUWEN	 KIB	 IMIX	 KIMI
V	 AKBAL	 LAMAT	 BEN	 ETZNAB

In addition to there being definable groups, order within the groups is also preserved in the almanacs t'ols. For example, Column A, Table 1's group of five will always retain its order (Table 2). That is not to say that *Men* is always the first day in a t'ol containing Column A but rather that *Men's* position, between *Manik'* and *Ak'bal*, invariably holds true. The same pattern exists for the groups of four. For example, Row I will always retain its order, regardless of what day begins the t'ol (Table 3). Understanding that each group can and does cycle, the grid in Table 1 should be viewed as two separate cycles, revolving independently and yet interwoven.

Table 2. Column A Variations

MEN	MANIK	KAWAK	CHUWEN	AKBAL
MANIK	KAWAK	CHUWEN	AKBAL	MEN
KAWAK	CHUWEN	AKBAL	MEN	MANIK
CHUWEN	AKBAL	MEN	MANIK	KAWAK
AKBAL	MEN	MANIK	KAWAK	CHUWEN

Table 3. Row I Variations

MEN	AHAW	CHIKCHAN	OK
AHAW	CHIKCHAN	OK	MEN
CHIKCHAN	OK	MEN	AHAW
OK	MEN	AHAW	CHIKCHAN

An important product of the arrangement of the day names into groups of four and five is the isolation of the Maya Year Bearers. Returning to Table 1, note that both the Classic and Post-Classic period Year Bearers are actually two of the five groups of five. The Classic Year Bearers, *Kawak*, *K'an*, *Muluk*, and *Ix*, appear in Row III. The Post-Classic switch is contained in Row II, *Ik'*, *Manik'*, *Eb*, and *Kaban*. Conversely, one Year Bearer, in either period, appears in each of the four groups of five. It would seem the group divisions used in the divination almanacs were made with presentation of the Year Bearers in mind.

In this divinatory formation, the days in the five groups of four are all five days apart and the days in the four groups of five are all twelve days apart. As they are displayed in Table 1, the order of the day names seems in no way related to their normal order (*Imix*=1, *Ahaw*=20). However, displaying them by their bar and dot numerical positions in the normal twenty day cycle order reveals the connection (Table 4). Each row group moves by fives, retaining the same number of dots. The realization of this numeric order within the groups is strong evidence supporting the recognition of the divinatory almanacs as the product of numerology.

Table 4. Groups of Four and Five in Bar and Dot Equivalents

	A	B	C	D
I	 MEN	 AHAW	 CHIKCHAN	 OK
II	 MANIK	 EB	 KABAN	 IK
III	 KAWAK	 KAN	 MULUK	 IX
IV	 CHUWEN	 KIB	 IMIX	 KIMI
V	 AKBAL	 LAMAT	 BEN	 ETZNAB

As can be seen from the groups of four and five's ability to cycle through one another, the arrangement of Table 1 is arbitrary. The groups could be arranged such that any of the twenty day names could appear in any square of the grid. *Men* was chosen to be the top left corner of the grid in order to emulate the only two almanacs in the first twenty three pages that do not adhere to the groupings pattern, Almanacs 34 and 38. Each contain the complete set of twenty day names, unsuppressed, in their normal numeric order. *Men* appears in the top left corner of both almanacs.

### GROUPS OF TEN

There are some cases in which there are ten day names represented at the beginning of an almanac. Without variation, these are a combination of either Table 1's Columns A and C or Columns B and D. Columns A and B never mix, neither do Columns C and D. There are a total of seven almanacs that have ten day names represented. Of those seven, three are two groups of five day names interwoven together, the other five keep the groups of five separate.

### ALMANACS 34 AND 38

Of the fifty two almanacs only two deviate from the pattern of vertical groups of four and five day t'ols. Both of these almanacs contain all twenty day names in written out form and in a grid pattern similar to that of Table 1. Unlike the other almanacs, these two follow the normal order of the twenty day name cycle. Almanac 34 has no associated numbers and thus is the only almanac for which no cycle order can be determined.

The groups of four from Table 1 are shown cycling horizontally across the day names of Almanac 34 (Figure 34). Note the Post-Classic Year Bearers across the bottom row. The groups of five, however, are corrupted by Almanac 34's arrangement. The opposite case is demonstrated by Almanac 38 (Figure 38). The groups of five are visible in the vertical columns of Almanac 38 but the horizontal rows of four are corrupted. Stranger still, the columns of five are in the correct groups but out of order. Still, each column contains one of the four Year Bearers.

From the analysis above, it would seem that Almanacs 34 and 38, among other purposes, were created to reconcile the natural order of the twenty day names with the numerological order employed by the rest of the divinatory almanacs. As stated earlier, Almanac 34 retains the groups of four horizontally and Almanac 38 retains the groups of five vertically. Combined, they match the grid in Table 1.

### GRID VARIATIONS

The divinatory almanacs, while always preserving the groups of four or five day names, rarely form a grid containing both simultaneously, such as the one in Table 1. In fact, Almanac 46, on the final page, is the only almanac that does. Some almanacs create grids using only one of the groups, repeating it (with different numeric coefficients) in every t'ol. Others use only two groups, others still only three groups. In addition, each column

skews slightly from the last, dependent on the day intervals between them. In other words, only the vertical columns of days are identifiably patterned within the almanacs. Horizontal groups vary with the day intervals that separate them. The horizontal rows in Table 1 are intended to demonstrate how the groups of four, when arranged vertically in divinatory almanacs, are related to groups of five in the same arrangement. When applied to create the divinatory almanacs, Table 1's grid, containing the groups of four and five interlocked, appears to have been manipulated somewhat like a Rubix Cube, with individual vertical column groups cycling to create many different patterns of days.

#### A QUICK METHOD OF OBTAINING ALL DAYS IN A GIVEN ALMANAC

It is not necessary to calculate across the horizontal rows for each of the vertical day names which appear on the far left of the almanac, be they four, five, or ten day names. Understanding that each vertical columns must contain one of the groups of four or five in their locked order, only the top row of day names need be calculated. Once the top row has been identified, the columns can be completed by using the grid in Table 1. Thus, by simply knowing the groups of four and five, an ancient Day Keeper could realize all the day names not shown by the almanacs with a minimum of mathematical calculation.

#### CONCLUSIONS

This chapter has presented evidence that the almanacs contained within the first twenty three pages of the Dresden Codex employ a numerologically manipulated version of the Tzolk'in through which to divine the future. Groups of four and five day names in a constant sequential order have been identified and shown to be interconnected. The groups cycle independently and yet remain interrelated. Considering that much of the Dresden Codex has been shown to be concerned with astronomical cycles, and relationships between those cycles, it is logical to suggest the divination pages are employing a similar concept. As archaeoastronomy has demonstrated, the Maya frequently model terrestrial space to mirror celestial space. The work of Friedel, Schele, and Parker has shown that the Maya conceptualize the motion of the night sky as a cosmic play, retelling of the creation story (1993:59-123). In the same spirit, the cyclical groups of four and five in the divinatory almanacs may have been created to mirror multi-cyclic nature of the heavens. A single cycle of 1 through 20 day names is divided into nine separate cycles, four of five day names and five of four day names. This view may provide essential insight into why the divination almanacs were believed to foretell the future. By matching the cycles of days on Earth to those seen in the heavens, a Day Keeper may have believed he gained knowledge of cyclical, sacred patterns of time hidden in the cosmic creation story. That hypothesis gains strength from Dennis Tedlock's work with the Popol Vuh. Tedlock's research, to be discussed in the following chapter, finds divination practices to be an integral part of the creation story itself.

## **CHAPTER 4: DIVINATION**

The single most elusive aspect of the first twenty three pages of the Dresden Codex is the way in which they were used. While we can be sure that their purpose was divination, we have little understanding of how they were applied. We can calculate all the featured days, identify the associated images, and even read many of the glyphic passages. Still, the interrelationships between almanacs remains unknown . Which of the 52 almanacs should be used when and how does one determine the stopping points? This chapter will investigate those issues. From the information presented previous to this chapter, we can summarize what we know of the Dresden divination pages by the following points: 1. Its divination power is based on the characteristics of the days in the 260 day ritual calendar. 2. The process involves counting through the days, arranged in columns and rows of even increments. 3. Prognostications are not applied to single days but to groups of four, five, or ten days in a column (t'ol). 4. Each prognostication is connected to a specific subject and an associated deity. 5. The subject matter of the almanacs varies considerably. Keeping these points in mind, the use of the 260 day calendar as a method of divination outside the context of the codices will now be discussed.

### **EARLY ACCOUNTS**

Divination using the 260 day ritual calendar is a well documented practice among the Maya. Accounts from the time of conquest into modern times have recorded Maya Day Keepers using the Tzolk'in as an oracle. Today, regrettably, the practice is said to have disappeared in Yucatan (Love 1992:212). In Highland Guatemala, however, 260 day divination is still going strong.

The work of Dennis Tedlock has demonstrated that Tzolk'in divination figures into Highland Maya cosmology from its origins. In the Popol Vuh, the Quiche creation story, Xmucane, grandmother of the hero twins, was a day keeper herself. She read seeds representing days of the 260 day calendar to confirm the identity of Blood Moon, mother of the twins (Tedlock 1992:231). In fact, a passage from the introduction of the Popol Vuh defines the entire book as an oracle. Tedlock translates from within a section praising the power of Quiche kings, " They know whether war will be waged. They see everything clearly before them. Whether death, whether hunger, whether quarrels will be caused, they simply know it, since there is an instrument for seeing it, there is a book. Council Book is their name for it." (1992:230). In Tedlock's estimation, the Popol Vuh was written from a hieroglyphic codex model, much like the Dresden. Considering that references to the story of the Popol Vuh occur in ceramics, iconography, and inscriptions from all over the Maya area and from as far back as the Preclassic, one must consider the practice of divination through day keeping at least as ancient.

From the conquest period, there are accounts of Maya priests divining with hieroglyphic books, the oldest accounts coming from within the Yucatan *Relaciones*. In 1566, Bishop Diego de Landa wrote, "The [priests] in their finery gathered in the ruler's house. First, as they were wont to do, they cast out the devil, and then they took

out their books and spread them out on fresh leaves which they had [there] for that purpose...the wisest of the priests opened a book and looked at the prognostications for the year, and declared them to those present and preached to them a little, recommending the remedies [against the evil forecasts]" (Gates 1978:71). Its unfortunate that Landa, a man who so carefully documented Maya culture at the time of conquest, is best remembered for the bonfire he once made of Maya books.

A second account of book use from Conquest period Yucatan comes from the Relacion de Dohot, written in 1579. Thompson quoted the author, "These priests...had books of figuras by which they governed themselves and there they had marked the times when they had to sow and harvest and to go hunting and go to war. And the priests corresponded with one another by figuras and knew what had happened years before" (1972:5). These early accounts confirm the divinatory nature of codices but do little to instruct as to their use.

### THE BOOKS OF CHILAM BALAM

The books of Chilam Balam ("Spokesman of the Jaguar"), written in Yucatan at different times over the Colonial period, are the best sources for comparative interpretation of the Maya codices. Most scholars believe they are the post-conquest equivalents of the codices, also produced in Yucatan. Written by the Maya in European script, the books are named after the towns in which they were composed. Edmonson reports a total of 12 existing Chilam Balams (1982:ix). The books are primarily chronicles of Maya history, tracked through a combination of European and Maya calendrical systems. As in the codices, divinations and astronomical cycles are also Chilam Balam subjects. Paxton cautions "the bulk of the material is of European origin" (1992:217). One must be careful to separate Maya from European content.

Prophecies for the *tun* and the *katun* are elements shared by nearly all of the Chilam Balams and the codices. This connection has been well demonstrated (Thompson 1972, Love 1992, Paxton 1992, Bricker and Bricker 1992). Though not as thoroughly investigated, almanacs foretelling the prophecies for the 260 day Tzolk'in are also featured within the Chilam Balams.

Some of the best work on the 260 day almanacs of the Chilam Balam comes from J. Eric Thompson. In the appendix of his book, Maya Hieroglyphic Writing, Thompson compared the divinatory almanacs of multiple Chilam Balams. He found their content quite similar to that of the codices. In the 260 day almanac of the Chilam Balam of Mani, he suggested the short adjacent entries are alphabetic adaptations of what were formerly glyphic passages from codices (1972:7). The last text in the Chilam Balam of Tizimin records all Tzolk'in days of the year 1626, each assigned a prognostication of *utz* (good) or *lob* (bad). Combining the information of these two manuscripts, Thompson created a table cataloging the subjects and prognostications (good or bad) for each day of the divinatory almanacs (1978:301). Since then, the work of Barbara Tedlock (1982) and others have shown that days are not simply good or bad but rather change from reading to reading depending on context. Thompson's table, while an incomplete, over simplified listing of the 260 days, none the less demonstrated that the Chilam Balams, like the codices, have divination almanacs which record specific days, featured subjects, and predicted

outcomes. As to the historical information that accompanies the Chilam Balam divinatory almanacs, Thompson wrote, “much of Maya prophecy is really repeated history, and without doubt Maya interest in the past was largely because of the light it threw on the future” (1972:7). The same statement may be extended to the Pre-conquest codices.

### HIGHLAND GUATEMALA

The practice of 260 day calendar divination has been present among the Maya of Highland Guatemala for as long as history records. Its involvement in the Popol Vuh was mentioned in a previous section of this chapter. That evidence alone attests to the antiquity of the practice. The commissioner of the Popol Vuh, Father Francisco Ximenez, wrote in 1722 of a hieroglyphic book he had in his possession. Known as “The Count of The Days”, it had 260 days listed vertically by fives, 52 day intervals in a row, and auguries written to the right. Dennis Tedlock has noted how closely this description mirrors the Dresden divination almanacs (Tedlock 1992:230).

In modern times, ethnographic field work in Highland Guatemala has confirmed the continued existence of the 260 day divination practice. One of the most thorough and insightful accounts comes from Barbara Tedlock. Since the 1970’s, she has held the status of Day Keeper, granted to her from a teacher in Momostenango, Guatemala. During their research in Momostenango, Barbara and her husband Dennis became apprentices to a Day Keeper. The story of how she learned to divine the meanings of the days may shed light on how the Dresden divination almanacs were applied (1982:53-73).

In the beginning of the process, a person’s Tzolk’in birthday helps to determine if they were meant to be a day keeper. Children born on Ak’bal, Kaban, K’an, Kimi, Ben, Eb, Manik’, Lamat, Ix, and Men have “lightning souls”, the ability to receive messages from the external world. The “lightning” is said to be felt in the blood. Once accepted for training, apprentice day keepers begin a schedule of visiting shrines on special days. During the first phase, the apprentice visits the “One Place” shrine on 6 consecutive days beginning with the coefficient “1”, over a period of 65 days total. These are the permission days. Simultaneously, they visit the “Eight Place” shrine on 4 consecutive days beginning with “8”. It is during this time that the novice first learns simple divining chants. They collect 150 dried beans or corn kernels to practice arranging and counting the days of the divinatory calendar. After visiting each shrine for consecutive “1” and “8” days, the apprentice moves on to the “Nine Place” shrine. Again, he or she visits the “Nine Place” on four consecutive “9” days. At this point, the trainee is a proper day keeper and may be initiated to the “Six Place” shrine.

One of the most important sequential day rituals in the town of Los Cipreses is performed by the head priest-shaman himself. He takes a pilgrimage, over forty days, in which he visits four mountain shrines dedicated to the four directions. He first visits the East on 11 Manik’. Thirteen days later, on 11 Ahaw, he visits the West. Thirteen days later, on 11 Ben, he visits the South. Finally, on 11 Kimi, he visits the North. At each shrine, he prays for the town, addressing the Day Lords, the ancestors, and the world for health, rainfall, and protection from natural disaster on behalf of the town.

When a day keeper in Momostenango performs a divination for a client, they do it through reading arrangements of seeds and crystals. The day keeper grabs a random handful of seeds and lays the out on a table in columns and rows. Beginning from the top left seed, he begins counting through the seeds horizontally. The first day is chosen on the basis of the day the client's problems began or else it is the day of the divination. The days are counted through until the day keeper feels the lightning in his blood. The days at which he stops are addressed for understanding. Two such days are chosen from the arrangement and those seeds are separated out as a reminder. The remaining seeds and crystals are gathered up and rearranged into a second reading group. Again, two days are separated out. The day keeper makes as many arrangements as necessary to understand the client's situation and divine the remedy. During the entire process, the day keeper and the client discuss the reasons for the visit. The conversation is key to successful divination. Barbara Tedlock explained, "Divination is *applied* epistemology: it does not operate independently of the particular question before the diviner and the client" (1982:171).

Once days are picked out from the arrangements, the day keeper interprets them according to context. Each of the twenty day names have their own meanings. The coefficients 1 through 13 accent the day meanings. The numbers 1, 2, and 3 are weak, 11, 12, and 13 are strong, and 7, 8, and 9 are indifferent. The day keeper uses what he knows of the client's situation and makes the best possible interpretation of the group of days he was compelled to choose. At the conclusion of the reading, the client becomes the day keeper's "burden". He will pray for the client on the days divined. The client is to be friendly and abstain from sex on those days if he or she wants the problem corrected.

A very similar form of 260 day calendar divination has been recorded as a tradition of the Ixil Maya, also in highland Guatemala (Colby and Colby 1981). During the mid-1960's, anthropologists Benjamin and Lore Colby lived among the Ixil Maya of Nebaj. They befriended a day keeper named Shas who, after some convincing, explained to them how he divined the days. As in Momostenango, Shas used seeds arranged in rows and columns. The seeds represent days which are counted horizontally from the top left corner. The far right column of days are called the "speaking days". The attributes of the "speaking days" are woven together to create a story that characterizes the situation. Through the story, Shas relates meaning and outcome. The Colbys make special note of the fact that day names can have more than one meaning. As in Momostenango, the question influences interpretation. According to Shas' method, two seed arrangements are read. The first is for diagnosis, the second for prescription. On the whole, the 260 day divination practices of the Momostenango and Nebaj day keepers are almost identical. Their similarity strongly suggests a common ancient tradition from which they were inherited.

## COMPARISONS

So how do these examples help us to understand the Dresden divination almanacs? In the first place, the highland practice of arranging days in rows and columns is identical to the *t'ol* format of the Dresden's almanacs.

From the account given by Father Ximenez about the hieroglyphic book called “Count of The Days”, we know that written divination almanacs once existed in the highlands. Considering the confiscation and destruction of Maya books perpetrated by the Spanish priest of the Colonial period, it is not surprising that seed arrangement divination became the favored method of reading the days.

The method through which the days are counted in the highlands is also identical to that of the Dresden almanacs. The count begins with the top left corner and progresses horizontally. When the far right column of days is reached, the count continues through the next row, starting again from the far left. In Shas’ method, the “speaking days” are the far right column. The only written out day columns in the Dresden almanacs, though written in the left hand side, are actually arrived at in the far right column (t’ol). The Momostenango method does not have set “speaking days”. Regardless, both highland methods of day counting discussed here closely match that of the Dresden almanacs.

Barbara Tedlock’s description of the Momostenango shrines and the specific days in which they are visited contains many possible Dresden connections. For instance, the day groupings. A day keeper goes to the “One Place” shrine not on one day, but six specific days, each with a coefficient of “1”. The “Eight Place” is visited on four consecutive “8” days. In the same way, the Dresden almanacs do not give prognostications to single days, only to groups of days with the same number. Further, the four “8” day visits all occur during the larger time period of the six “1” day visits. The result is a cycle of 39 days contained within and running parallel to a cycle of 65 days. Though not exact, this practice is quite similar to the interlocked cycles of four and five day names found in the Dresden.

The specific days in which Momostenango shrines are visited is another source of parallels. There are eight almanacs in the first twenty three pages of the Dresden that contain only days with the same coefficient. Like the days to visit the “Eight Place”, Dresden Almanacs 11, 12, and 17 feature only “8” days. Almanac 21 features only “1” days. Other single coefficient Almanacs include; Almanac 16 with only “10” days, Almanac 30 with only “13” days, Almanac 36 with only “11” days, and Almanac 45 with only “3” days. One of the most important day keeper pilgrimages described by Tedlock was that of the Los Cipreses town priest to the four directions, each visit occurring on an “11” day. Only 2 of the 52 Dresden almanacs involve the four directions, Almanacs 12 and 45. While neither feature only “11” days, both are included in the single coefficient almanac group discussed above. It is possible that the same kind of coefficient oriented direction worship known to occur in the highlands is evidenced in the Dresden. If so, it would be a good explanation for the placement of what Thompson called “chants to the four directions” (1972:37) within a group of divination almanacs.

Another interesting question brought up through the comparison of the Dresden to Highland practices is the question of how many almanacs would be used in a single divination. In the Colby’s report on Ixil divination, Shas used two seed arrangement, one for diagnosis, the other for prescription. Tedlock’s example from Momostenango employed four separate arrangements of seeds. The Dresden almanacs have many subjects. Some concern events, such as marriage or receiving food. Others concern actions, such as planting or weaving. The most

repeated subject within the first fifty two almanacs, however, is divination. *Tu chich*, “his prognostication” is the subject of four almanacs; Almanacs 8, 15, 16, and 24. *U mut*, “his news” is the subject of two; Almanacs 40 and 47. The final twenty almanacs, known as the Moon Goddess Pages, frequently contain subjects reading *u kuch*, “her burden” and *yatan*, “payment, offering” or “marriage”. Highland divination rites end in a similar manner, with payment and the client becoming the “burden” of the day keeper. Considering the overall similarity of the Highland examples, it is quite possible that the Dresden almanacs were meant to be used in groups, a combination of event, action, and divination almanacs to produce a single reading.

Finally, there is the issue of using the Dresden almanacs. When day keepers in highland Guatemala lay out a grid of seeds to divine, the reading is circumstance specific. The subject is provided by the client and the top left corner day can be any one the day keeper needs it to be. Not so with the Dresden almanacs. The days in the Dresden are fixed. To use a Dresden almanac in the manner in which they are used in the Highlands, a day keeper would have to use one of the prewritten days. The subject matter, while varied and seldom duplicated, is also preordained in the Dresden. If the Dresden almanacs were used in a way similar to Highland seed divination, it appears the choice of almanacs to be used was based on subject rather than the featured days.

## **CHAPTER 5: CONCLUSION**

The goal of this report was to provide a comprehensive description of the first twenty three pages of the Dresden Codex. In the Commentary Chapter, hieroglyphs, images, and day computations were discussed. In the Numerology Chapter, the underlying pattern of day names in the almanacs was investigated and shown to be based on set groups of four and five days arranged in columns. In the Divination Chapter, the Dresden almanacs were compared to other examples of 260 day divination practices from the Maya region, past and present.

Eric Thompson divided the Dresden's first twenty three pages into two groups "Miscellaneous Almanacs" and the "Moon Goddess Pages" (1972). Hofling and O'Neil have presented evidence that furthers the separation of the Moon Goddess Pages (1992:118-120). Bricker and Bricker have suggested that the "Planter's Almanac", Almanac 23, is individually dated to 1170 AD. In the same paper, they went on to suggest the almanacs may have been accumulated over long periods of time, copies and recopied over centuries (1992:61-84).

Despite the insights of those excellent studies, this report concludes that the almanacs were created as a set. The very number of the almanacs in the first twenty three pages, fifty two, suggests they are a set. Not only is fifty two the number of years in a sacred Calendar Round but it is also the most common divisor of the 260 day period found in the Dresden. The augural outcome glyphs, described in the Commentary Chapter, are also a constant element of the almanacs, suggesting their unity. A new line of evidence was presented in the Numerology Chapter. Groups of four and five day names were shown to be present in every almanac. Thus, while the subject matter of the almanacs does indeed seem disconnected, underlying similarities mark them as a set.

Table 5 presents a complete listing of all readable day associations from the first twenty three pages. Associated subjects, deities, and prognostications as well as almanac and t'ol locations are included. Only four of the 260 days are not represented in the remaining fifty almanacs. It is quite possible those four days, *7 Men*, *Manik'*, *Kawak*, and *Ak'bal*, were once in the first two almanacs, now destroyed. Eric Thompson created a similar table using the 260 day information of the Chilam Balams (1978:Table 20). Table 5 deviates from Thompson's format in two major ways. First, rather than listing all twenty day names individually, they are listed in the t'ol groups of four and five within which they occur. Second, few days are presented as strictly good or bad. Thompson's analysis of the Chilam Balams concluded that each day had a single association, *lob* (bad) or *utz* (good). The Dresden almanacs, when taken as a whole, seem to mirror the Highland Guatemala system, in which days have different meanings, dependent on context.

As discussed in the Divination Chapter, the way in which the almanacs were used is still uncertain. We know what the almanacs say but not how to use them. It is possible they were connected to a long count date once written into the first page, now destroyed. An alternative hypothesis regards the almanacs as timeless divination tools based on events which occurred in the mythic past. Whatever their temporal affiliation, it is almost certain

their use was prompted by specific questions in a way similar to the Highland Guatemala tradition of client and day keeper.

In Conclusion, the first fifty two almanacs should be considered tools of the ancient Yucatan Day Keepers. A person of western culture cannot use them. In Highland Guatemala, the seeds are but the tools of the Day Keeper. Divination is prompted by “lightning blood” and careful analysis of the client’s situation. Anyone can make an arrangement of seeds and crystals but only a trained day keeper has the power to read them.

The true power of the Dresden almanacs came not from the pages themselves but from the “lightning souls” of the Day keepers who read them. Table 5 can show us all the possible prognostications but only a person with the ability to receive messages from the other world and trained in the ancient Yukatek tradition could properly choose between them. The power of the Dresden almanacs to predict the future is more than a trick of math and more than a list of day attributes. They are like the paint brush and canvas left behind by a great artist. Anyone can possess his tools but few have the ability to recreate his art.

Table 5. Day Name Associations from the First Twenty Three Pages

A. MEN, MANIK', KAWAK, CHUWEN, AK'BAL (57 total occurrences)

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A3	T4	?	?	Moon Goddess
	A5	T2	Pos	<i>yatan u chuy</i> , his offering, net weaving	Itzamna
	A15	T4	Neg	<i>hoch' u chich</i> , fire drilling prognostication	God Q
	A21	T1	Neg	<i>petah</i> , to set spinning?	Death God A
	A26	T4	neutral	offering?	God H
	A28	T7	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
	A29	T1	Neg	<i>mol</i> , to gather up?	Death God A
	A44	T1	Pos	<i>yatan</i> , his wife - the Moon Goddess	God L
2	A3	T3	Neg	?	Moon Goddess
	A14	T8	Neg	?	God H
	A28	T4	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A31	T4	Pos	<i>yatan</i> , his offering or payment	God L
	A35	T3	Neg	?	Moon Goddess
	A37	T4	Pos	<i>yatan</i> , his offering or payment	?
	A38	T5	Pos	<i>ch'ok</i> , child or sprout	Chak
	A43	T3	Neg	<i>ch'ok</i> , child or sprout	Death God A
A44	T3	Pos	<i>yatan</i> , his wife - the Moon Goddess	animal?	
3	A8	T2	Pos	<i>tu chich</i> , his prognostication	Chak
	A20	T1	Pos	<i>petah</i> , to set spinning?	Kawil
	A28	T8	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A29	T4	Pos	<i>mol</i> , to gather up?	Maize God
	A38	T4	Neg	<i>ch'ok</i> , child or sprout	God Q
	A45	T4	Pos	the direction south	Maize God
4	A15	T1	Pos	<i>hoch' u chich</i> , fire drilling prognostication	God R
	A27	T3	Pos	<i>chak'ah</i> , to close the eyes and make signs?	Itzamna
	A38	T1	?	<i>ch'ok</i> , child or sprout	Maize God
	A50	T4	Pos	<i>u kuch'</i> , her burden - Maize God	Moon Goddess
5	A20	T4	Neg	<i>tu chich</i> , his prognostication	the vulture
	A24	T2	Pos	<i>tum tu chich</i> , ? his prognostication	Itzamna
6	A28	T5	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
	A38	T3	Pos	<i>ch'ok</i> , child or sprout	God C
	A48	T1	Neg	<i>u kuch'</i> , her burden - Death God A	Moon Goddess
7	none			none	none
8	A8	T19	Neg	<i>tu chich</i> , his prognostication	Oxlahun Kuy
	A11	T1	Pos	offering? cacao	Kawil
	A12	T3	?	direction - east?	Death God A

	A17 A20	T2 T5	Neg Pos	<i>nuch</i> , to get together head to head <i>tu chich</i> , his prognostication	God A/ Kuy God L
9	A8 A10 A14 A43	T14 T1 T13 T1	Pos Pos Neg Pos	<i>tu chich</i> , his prognostication <i>och kakaw</i> , offering? cacao ? <i>ch'ok</i> , child or sprout	Chak Boli Kawil Chak God U
10	A16 A22 A37	T3 T5 T1	Pos Neg Neg	<i>Tz'un u chich</i> , ? prognostication <i>mak' wah</i> , to eat bread w/ honey and fruit <i>yatan</i> , his wife - the Moon Goddess	Itzamna God R ?
11	A7 A26 A28 A40 A50	T3 T2 T3 T1 T1	Neg Pos Pos Pos Neg	<i>yatan</i> , his offering or payment offering? cacao <i>k'aa ha' wah</i> , abundance of water and bread <i>mut yaxun</i> , yaxun bird's omen <i>u kuch'</i> , her burden - God Q	Death God A Itzamna Itzamna Moon Goddess Moon Goddess
12	A8 A24 A31 A37 A38	T1 T4 T2 T2 T2	Neg Neg Neg ? Neg	? <i>tu chich</i> , ? his prognostication <i>tum u chich</i> , ? his prognostication <i>yatan</i> , his wife - the Moon Goddess <i>yatan</i> , his wife - the Moon Goddess <i>ch'ok</i> , child or sprout	God H Death God A vulture/dog ? ?
13	A3 A19 A41 A52	T5 T1 T1 T4	? Pos Pos Pos	? <i>kakaw</i> , cacao <i>yatan</i> , his wife - the Moon Goddess <i>yatan</i> , his wife - the Moon Goddess	? Chak God H Ho Pawatun

**B. AHAW, EB, K'AN, KIB, LAMAT (71 total occurrences)**

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A7 A8 A40	T5 T16 T4	Neg Pos Neg	<i>yatan</i> , his offering or payment <i>tu chich</i> , his prognostication <i>u mut kimi</i> , the Death God's omen	Xbalanque Itzamna Moon Goddess
2	A6 A14 A31 A32 A38	T1 T11 T3 T1 T5	Pos Neg Pos Neg Pos	<i>u pik</i> , her skirt ? <i>yatan</i> , his offering or payment <i>u mak' nikte?</i> , to eat ? w/ honey and fruit <i>ch'ok</i> , child or sprout	Moon Goddess Death God A Itzamna Death God A Chak
3	A8 A22 A27 A29 A32 A38 A45	T7 T4 T6 T3 T2 T4 T1	Pos Pos Neg Neg Pos Neg Pos	<i>tu chich</i> , his prognostication <i>mak' wah</i> , to eat bread w/ honey and fruit <i>u chak'ah</i> , to close eyes and make signs? <i>mol</i> , to gather up? <i>u mak' nikte?</i> , to eat ? w/ honey and fruit <i>ch'ok</i> , child or sprout offerings to the direction East	God H God L God Q God Q Itzamna God Q Chak

4	A3	T2	Pos	<i>yatan</i> , his offering or payment	Maize God
	A9	T3	Pos	offering?	God H
	A38	T1	?	<i>ch'ok</i> , child or sprout	Maize God
	A48	T3	Neg	<i>u kuch'</i> , her burden - <i>muy</i> ?	Moon Goddess
5	A3	T1	Neg	<i>yatan</i> , his offering or payment	Xbalanque
	A7	T1	Neg	<i>yatan</i> , his offering or payment	the vulture
	A9	T2	Neg	offering?	Oxlahun Kuy
	A13	T2	Neg	<i>tzen u pak'ah</i> , planting food	Death God A
	A26	T1	Neg	offering?	Death God A
	A29	T5	Neg	<i>mol</i> , to gather up?	Sun God
	A37	T5	Neg	<i>yatan</i> , his offering or payment	?
6	A4	T1	Pos	<i>u chuy</i> , she weaves	Moon Goddess
	A8	T13	Neg	? <i>tu chich</i> , ? his prognostication	Death God A
	A14	T12	Neg	?	Death God A
	A22	T6	Pos	<i>mak' wah</i> , to eat bread w/ fruit and honey	Itzamna
	A28	T1	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
	A29	T2	Pos	<i>mol</i> , to gather up?	Itzamna
	A37	T3	Pos	<i>yatan</i> , his offering or payment	?
	A38	T3	Pos	<i>ch'ok</i> , child or sprout	God C
	A42	T2	Pos	<i>yatan</i> , her offering or payment	Moon Goddess
A49	T1	Neg	<i>u kuch</i> , her burden - <i>sak chak kimi</i>	Moon Goddess	
7	A8	T8	Pos	? <i>tu chich</i> , ? his prognostication	God H
	A28	T6	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A37	T6	Neg	<i>yatan</i> , his offering or payment	Moon Goddess
	A44	T4	Neg	<i>yatan</i> , his wife - the Moon Goddess	the deer
8	A8	T4	Neg	? <i>tu chich</i> , ? his prognostication	God Q
	A10	T2	Neg	offering?	Oxlanhun Kuy
	A12	T4	?	offerings to the direction West?	Itzamna
	A14	T6	Neg	?	God C
	A28	T2	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A42	T1	Neg	<i>yatan</i> , her offering - the armadillo	Moon Goddess
	A44	T2	Neg	<i>yatan</i> , his wife - the Moon Goddess	the dog
9	A31	T1	Neg	<i>yatan</i> , his offering - the deer	Wuk Zip
	A40	T5	Pos	<i>u mut</i> , his account - Itzamna	Moon Goddess
10	A9	T1	Pos	?	Itzamna
	A16	T4	Neg	<i>tz'un u chich</i> , ? his prognostication	Xbalanque
11	A8	T10	Pos	? <i>tu chich</i> , ? his prognostication	God L
	A9	T5	Pos	?	Maize God
	A14	T10	Neg	?	Ho Pawatun
	A40	T3	Pos	<i>tz'ul u mut</i> , his account - the dog	Moon Goddess
	A52	T1	Neg	<i>xib</i> , fright or young male child	Moon Goddess
12	A8	T5	Pos	? <i>tu chich</i> , ? his prognostication	God C
	A9	T4	Neg	?	Death God A

	A14	T7	Neg	?	God H
	A20	T2	Neg	<i>petah</i> , to set spinning?	Sun God
	A38	T2	Neg	<i>ch'ok</i> , child or sprout	?
	A52	T1	Neg	<i>xib</i> , fright or young male child	Moon Goddess
13	A6	T2	Neg	<i>u pik</i> , his skirt	Death God A
	A7	T2	Pos	<i>yatan</i> , his offering or payment	Maize God
	A15	T2	Neg	<i>hoch u chich</i> , fire drilling prognostication	Death God A
	A27	T4	Neg	<i>chak'ah</i> , to close the eyes and make signs	God Q
	A29	T6	Pos	<i>mol</i> , to gather up?	Chak
	A40	T6	Neg	<i>muan u mut</i> , his account - the muan bird	Moon Goddess
	A48	T2	Pos	<i>u kuch</i> , her burden - Itzamna	Moon Goddess
	A49	T2	Pos	<i>u kuch</i> , her burden - Maize God	Moon Goddess
	A50	T5	Pos	<i>u kuch</i> , her burden - <i>sak nik</i> ?	Moon Goddess

**C. CHIKCHAN, KABAN, MULUK, IMIX, BEN (44 total occurrences)**

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A14	T4	Neg	?	Itzamna
	A21	T2	Pos	<i>petah</i> , to set spinning?	God H
	A28	T7	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
	A29	T1	Neg	<i>mol</i> , to gather up?	Death God A
	A44	T1	Pos	<i>yatan</i> , his wife - the Moon Goddess	God L
2	A28	T4	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A31	T4	Pos	<i>yatan</i> , his offering or payment	God L
	A37	T4	Pos	<i>yatan</i> , his offering or payment	?
	A38	T5	Pos	<i>ch'ok</i> , child or sprout	Chak
	A44	T3	Pos	<i>yatan</i> , his wife - the Moon Goddess	animal?
3	A28	T8	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A29	T4	Pos	<i>mol</i> , to gather up?	Maize God
	A38	T4	Neg	<i>ch'ok</i> , child or sprout	God Q
	A45	T2	Pos	offerings to the direction North	Moon Goddess
4	A26	T3	Neg	receiving?	Oxlahun Chanal
	A38	T1	Neg	<i>ch'ok</i> , child or sprout	Maize God
5	A14	T5	Neg	?	God C
6	A8	T18	Pos	? <i>tu chich</i> , ? his prognostication	Maize God
	A22	T1	Neg	<i>mak' wah</i> , to eat bread w/ honey and fruit	Death God A
	A28	T5	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
	A38	T3	Pos	<i>ch'ok</i> , child or sprout	God C
7	A50	T3	Neg	<i>u kuch</i> , her burden - Death God A	Moon Goddess
	A52	T3	Neg	receiving?	Moon Goddess
8	A11	T2	Neg	<i>och kakaw</i> , offering? cacao	Death God A
	A12	T1	?	offerings to the direction South	Maize God

	A14	T9	Neg	?	Ho Pawatun
	A17	T1	Pos	<i>nuch</i> , to get together head to head	Itzamna
	A20	T3	Pos	<i>petah tu chich</i> , to set spinning?, his prog.	Maize God
9	A10	T1	Pos	offering? cacao	Kawil
	A22	T3	Pos	<i>mak' wah</i> , to eat bread w/ honey and fruit	God C
	A24	T1	Neg	<i>tum u chich</i> , ? his prognostication	Sun God
	A27	T5	Pos	<i>chak'ah</i> , to close the eyes and make signs	Itzamna
10	A8	T20	Neg	? <i>tu chich</i> , ? his prognostication	Death God A
	A16	T1	Pos	<i>tz'un u chich</i> , ? his prognostication	Maize God
	A37	T1	Neg	<i>yatan</i> , her offering or payment	Moon Goddess
11	A8	T15	Neg	? <i>tu chich</i> , ? his prognostication	the vulture
	A28	T3	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
12	A15	T3	Pos	<i>hoch u chich</i> , fire drilling prognostication	Itzamna
	A27	T1	Pos	<i>chak'ah</i> , to close the eyes and make signs	Itzamna
	A31	T2	Neg	<i>yatan</i> , wife of	dog/ vulture
	A35	T4	?	offering?	Moon Goddess
	A37	T2	?	<i>yatan</i> , her offering or payment	Moon Goddess
	A38	T2	Neg	<i>ch'ok</i> , child or sprout	?
13	A39	T4	Neg	<i>u kuch</i> , her burden - God Q	Moon Goddess

**D. OK, IK', IX, KIMI, ETZ'NAB (57 total occurrences)**

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A8	T6	Neg	? <i>tu chich</i> , ? his prognostication	Sun God
	A21	T3	Neg	<i>petah</i> , to set spinning?	Death God A
2	A22	T2	Pos	<i>mak' wah</i> , to eat bread w/ honey and fruit	Maize God
	A31	T3	Pos	<i>yatan</i> , his offering or payment	Itzamna
	A32	T1	Neg	<i>u mak' nikte</i> , to eat flowers? w/ honey	Death God A
	A38	T5	Pos	<i>ch'ok</i> , child or sprout	Chak
	A52	T6	Pos	<i>yal?</i> , child of	Moon Goddess
3	A5	T3	Neg	<i>u chuy</i> , he/she weaves	?
	A8	T17	Neg	? <i>tu chich</i> , ? his prognostication	Death God A"
	A14	T1	Neg	?	Itzamna
	A24	T3	Pos	<i>tum u chich</i> , ? his prognostication	God H
	A29	T3	Neg	<i>mol</i> , to gather up?	God Q
	A32	T2	Pos	<i>u mak' nikte</i> , to eat flowers? w/ honey	God H
	A38	T4	Neg	<i>ch'ok</i> , child or sprout	God Q
	A43	T2	Pos	<i>ch'ok</i> , child or sprout	Itzamna
	A45	T3	Neg	?	Sun God
4	A8	T12	Pos	? <i>tu chich</i> , ? his prognostication	Kawil
	A38	T1	?	<i>ch'ok</i> , child or sprout	Maize God
	A39	T2	Neg	<i>u kuch</i> , her burden - Death God A	Moon Goddess

5	A29	T5	Neg	<i>mol</i> , to gather up?	Sun God
	A37	T5	Neg	<i>yatan</i> , her offering or payment	Moon Goddess
	A40	T2	Pos	<i>u mut ma'ax</i> , the monkey's news	Moon Goddess
6	A8	T3	?	? <i>tu chich</i> , ? his prognostication	Kan Pawatun
	A28	T1	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
	A29	T2	Pos	<i>mol</i> , to gather up?	Itzamna
	A35	T2	Pos	?	Moon Goddess
	A37	T3	Pos	<i>yatan</i> , her offering or payment	Moon Goddess
	A38	T3	Pos	<i>ch'ok</i> , child or sprout	God C
7	A14	T2	Neg	?	Itzamna
	A28	T6	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A35	T1	Pos	?	Moon Goddess
	A37	T6	Neg	<i>lob</i> , despair	Moon Goddess
	A44	T4	Neg	<i>yatan</i> , his wife - the deer	Moon Goddess
	A52	T5	Neg	<i>yatan</i> , his wife - Death God A	Moon Goddess
8	A10	T2	Neg	?	Oxlahun Chanal
	A12	T2	?	the direction North	God H
	A27	T2	Neg	<i>chak'ah</i> , to close the eyes and make signs	God Q
	A28	T2	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
	A35	T5	?	?	Moon Goddess
	A44	T2	Neg	<i>yatan</i> , his wife - <i>tz'ul</i> , the dog	Moon Goddess
9	A8	T9	Neg	? <i>tu chich</i> , ? his prognostication	Death God A
	A31	T1	Neg	<i>yatan</i> , his offering - the deer	Wuk Zip
	A50	T2	Neg	<i>u kuch</i> , her burden - <i>k'ak</i> , fire	Moon Goddess
10	A5	T1	Pos	<i>u chuy yatan</i> , she weaves, payment	Maize God
	A16	T2	Neg	<i>tz'un u chich</i> , ? his prognostication	Death God A
	A41	T2	Neg	<i>yatan</i> , his wife - Death God A	Moon Goddess
11	A4	T2	Neg	<i>u chuy yatan</i> , she weaves, payment	Death God A
	A14	T3	Neg	?	God C
	A39	T3	Pos	<i>u kuch</i> , her burden - Itzamna	Moon Goddess
12	A14	T14	Neg	?	Chak
	A38	T2	Neg	<i>ch'ok</i> , child or sprout	?
13	A7	T4	Pos	<i>u bak yatan</i> , his prisoner, payment	Kawil
	A8	T11	Neg	? <i>tu chich</i> , ? his prognostication	the dog
	A13	T1	Pos	<i>u pak'ah</i> , he plants	Itzamna
	A19	T2	Neg	<i>och u kawaw</i> , receiving? cacao	God Q
	A29	T6	Pos	<i>mol</i> , to gather up?	Chak
	A39	T1	Pos	<i>u kuch</i> , her burden - Chak	Moon Goddess

**I. MEN, AHAW, CHIKCHAN, OK** (3 total occurrences)

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A23	T1	Pos	<i>u pak'ah</i> , he plants	Chak
5	A46	T3	?	<i>hok' u sih</i> , to sieze his gift	Kawil
11	A36	T5	?	<i>yatan</i> , her offering - Itzamna	Moon Goddess

## II. MANIK', EB, KABAN, IK' (6 total occurrences)

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A23	T4	Pos	<i>u pak'ah</i> , he plants	God M
2	A25	T1	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	Itzamna
4	A46	T4	Neg	<i>hok' u sih</i> , to sieze his gift	Death God A
10	A18	T1	Pos	<i>nuch</i> , to get together head to to head	Itzamna/Maize God
11	A36	T4	?	<i>yatan</i> , her offering - Death God A	Moon Goddess
13	A30	T1	Pos	<i>kaw nikte</i> , ? flowers?	Itzamna

## III. KAWAK, K'AN, MULUK, IX (5 total occurrences)

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
1	A23	T3	Pos	<i>u pak'ah</i> , she plants	Moon Goddess
3	A18	T2	Neg	<i>nuch</i> , to get together head to to head	God Q/Death God A
3	A46	T5	?	<i>hok' u sih</i> , to sieze his gift	Maize God
8	A46	T6	Pos	<i>hok' u sih</i> , to sieze his gift	the vulture
11	A36	T3	?	<i>yatan</i> , her offering - death?	Moon Goddess

## IV. CHUWEN, KIB, IMIX, KIMI (5 total occurrences)

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
5	A25	T3	Pos	<i>k'aa ha' wah</i> , abundance of water and bread	God C
6	A23	T2	Neg	<i>u pak'ah</i> , she plants	?
7	A46	T1	Pos	<i>hok' u sih</i> , to sieze his gift	Ho Pawatun
11	A36	T2	?	<i>yatan</i> , her offering - God H	Moon Goddess
13	A30	T3	Neg	<i>kaw nikte</i> , ? flowers?	Sun God

## V. AK'BAL, LAMAT, BEN, ETZ'NAB (5 total occurrences)

Coefficient	Almanac	T'ol	Prog.	Subject	Deity
6	A46	T2	Neg	<i>hok' u sih</i> , to sieze his gift	Xbalanque
11	A36	T1	?	<i>yatan</i> , her offering - God H	Moon Goddess
12	A25	T4	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	God R
13	A25	T2	Neg	<i>k'aa ha' wah</i> , abundance of water and bread	Death God A
13	A30	T2	Pos	<i>kaw nikte</i> , ? flowers?	Ho Pawatun

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