

AN ANALYSIS OF ROADS LISTED
IN COLONIAL DICTIONARIES
AND THEIR RELEVANCE TO PRE-HISPANIC LINEAR FEATURES
IN THE YUCATAN PENINSULA

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ABSTRACT

The archeological evidence for pre-Columbian roadways in the northern Mayan area is well documented. These roadways range from broad intracity causeways and long, raised intercity roadways to small local pathways. In the colonial Mayan-Spanish and Spanish-Mayan dictionaries written by Franciscan Friars in the late 16th and early 17th centuries there are various references to roadways. These references were located by a computer-aided search through the dictionaries. Supplementing these references is the information given in various documents written by Franciscan historians as well as the variety of documents written by the Maya. This information was also located by doing computer-aided searches through computerized versions of these documents. The purpose of this paper is to look at these various references to see how the information in them can be used to broaden our understanding of Mayan roadways, culture and society.

The types and varieties of man-made linear features of the Central and Northern Mayan area are varied, covering everything from the *zac be*¹ between *Coba*,² Quintana Roo and *Yaxuna*,³ (Figure 1) Yucatan, almost 100 km in length (Folan 1985, Villa Rojas 1934), intrasite *zac beob* (Benavides 1976, Folan 1977a, Folan and Stuart 1974, Folan and Stuart 1977, Folan, Kintz and Fletcher 1983a, Thompson 1928 and Thompson et al. 1932) (Figure 2), and those features a few meters long, such as walkways and property walls. (Folan et al. 1983a). Although not all of these features are impressive, taken together they contribute to a better understanding of the ancient Maya in terms of sociopolitical relationships and transportation. When thinking of *zac beob* we should take into consideration the existence of real as well as mythological routes as well as noting the difference between the terrestrial, celestial and subterranean routes of the Maya (Folan 1976, 1977a) who referred to these roadways using a variety of terms. Moreover, *zac beob* were at times used as dikes in *Coba* (Folan 1982, Folan 1992a) and El Mirador, Guatemala (Dahlin et al 1980), as well as possible dams associated with the Candelaria River (Vargas 1997).

It should be noted that the term *zac be* was not used in early historical documents. The Spanish term *calzada* was the one generally used

¹White road, from *zac* = white and *be* = road. However, Morley and Brainard (1963:309) gives the following: The word *sacbe* (*sacbeob*, plural) means in Maya “artificial road” - *sac*, “something artificial, made by hand”; and *be*, “road.”

This is a misinterpretation of an alternative meaning of *zac*. Compare, for example, with the Motul I: *Çac*: en composicion de algunas diciones disminuye la significacion o denota cierta imperfeccion, como *çac cimil*, *çac cheh*, *çac yum*, etc. lo qual se pondra adelante.

Frequently the true meaning of this *zac* is “false, feigned”, but it would be incorrect to say that *zac be* = “false road”.

²See Motul I: Ah *coba*: especie de los faisanes llamados *bach*. *Bach* is the bird *Ortelis vetula pallidiventris* (Roys 1931) or *Cissolopia yucatanica* (Folan et al. 1983a), and is called *chachalaca* in Spanish. Alternatively, perhaps “Putrid Water” is meant, from *cob* = putrid and *-a* = water. Compare with the following entries in the Vienna: Alberca de agua: *koba*; *pek*. / Lago o laguna de agua: *koba*; *hoc akal*. / Piélago de río: *koba*., from which one might assume that *Koba* is in fact the correct spelling of this word. However, the *Books of Chilam Balam* consistently spell this name as *Coba*. Often these texts refer to *Coba* as *Kinchil Coba*. (The numeric terms *kinchil* and *hun tzootz cheh* (= all of the hair of a deer) are given as being equivalent in Beltrán’s *Arte*, and are glossed as “un millon”. A rough English equivalent might be “innumerable”. Strictly speaking, *kinchil* equals 3,200,000.) In the text from the *Chumayel* which notes that *13 Ahau Katun* is seated at *Kinchil Coba*, the parallel text from the *Ti Tzimin* gives the alternative site name *Cabal Ix Bach Can*. The meaning of this alternative name is not absolutely certain. *Cabal* = low, *ix* = female, *bach* = *chachalaca*, *can* = snake/shoot. However, since the word for “sky/heaven” is spelled both *can* and *caan* in the Mayan colonial texts, an alternative meaning might involve the word “heaven” rather than “snake”. Yet another alternative is that *ix bach can* is an yet unidentified plant name, this because the word *can* is a common term meaning “shoot/tendrill” and is to be found in various plant names. The use of *cabal* as given in this name is consistent with Mayan plant nomenclature. It is interesting to note that both from the Motul I entry given above and the *Chilam Balam* entry it appears that *Coba* and the bird *bach* are interconnected.

³Perhaps originally *Yaxuma*, from *yaxum* = the bird *Cotinga amabilis* and *-a* = water.

by such writers as Landa (1966) Lizana (1633) and Cogolludo (1971) and appears to be most equivalent to the term *zac be* used in the modern literature. It is worth commenting that in the early dictionaries the terms *be tun*⁴ and *zac be* are both given as equivalent to *calzada*.

MYTHOLOGICAL ROADWAYS, SKYWAYS AND SUBTERRANEAN PASSAGEWAYS

Aside from the observable and measurable terrestrial roadways, remains of which can be found today are the seemingly mythological terrestrial *zac beob* that remain in folk memory. One of these is the *zac be* between *Ich Caan Ziho*⁵ (Mérida) and the coast fronting the island of *Cuzamil* (Cozumel)⁶ (Cogolludo 1971, Fedick 1996 and Isphording 1975) and thus a roadway of some 260 km in length (Figure 1). It was on the island of *Cuzamil* that the Maya goddess *Ix Chel*⁷ reigned at the moment of the conquest (Landa 1966). Her shrine on the island was a focal point for pilgrims from places as far away as Guatemala and Chiapas.⁸ Another such roadway goes between *Coba* and the Cenote Sagrado⁹ of *Chi Cheen Itza*,¹⁰

⁴Stone road, from *be* = road and *tun* = rock / stone.

⁵In Heaven Born, from *ich* = in, *caan* = sky, heaven, and *zih* = to be born. During the colonial period and today the Mayan populace refer to the city as *Ho*, from which the writers of Spanish historical sources get *T-Ho* or *Ti Ho*. Note that the principal temple in Mérida, perhaps where the Casa del Pueblo now stands (that is, the area bounded by Calles 65, 46, 67, and 50), was, according to the Motul I Dictionary, called *Chun Caan*, the Base of Heaven. See Motul I: Ah chun caan: ydolo de los indios antiguos de Merida. ¶ Item: el cerro grande que esta tras San Francisco de Merida.

⁶This island is called *Cuzamil* in Mayan documents, and is derived from *cuzam* = swallow.

⁷Fair-skinned Woman, from *ix* = female and *chel* = fair-skinned. *Chel* also means “rainbow”.

⁸It is interesting to note that Cogolludo (1971) mentions the existence of such a roadway: Cog/His/I:24: Era Cozumél el mayor Santuario para los indios que habia en este reino de Yucatan, y á donde recurrian en romeria de todo él por unas calzadas que le atravesaban todo, y hoy permanecen en muchas partes vestigios dellas, que no se han acabado de deshacer, y asi habia alli grandes kues (*ku na*), adoratorios de ídolos. Cog/His/I:250-251: Consérvase hoy la memoria, de mas de lo escrito en las historias, de que la isla de Cozumél era el supremo santuario, y como romano de esta tierra, donde no solo los moradores de ella, pero de otras tierras concurrían á la adoracion de los ídolos, que en ella veneraban, y se vén vestigios de calzadas que atraviesan todo este reino, y dicen rematan á lo oriental dél en la playa del mar, desde donde se atraviesa un brazo dél, de distancia de cuatro leguas, con que se divide esta Tierra Firme de aquella isla. Estas calzadas eran, como caminos reales, que guiaban sin recelo de perderse en ellos, para que llegasen <251> á Cozumél al cumplimiento de sus promesas, á las ofrendas de sus sacrificios, á pedir el remedio de sus necesidades, y á la errada adoracion de sus Dioses fingidos.

⁹One of two cenotes or sink holes in the center of *Chi Cheen Itza*. The other cenote is *X-Toloc*, mentioned later in this paper. In the colonial Mayan texts there is no special name for the Cenote Sagrado. The name of the site is *Chi Cheen* or *Chi Cheen Itza*, or occasionally *Uucil Yaab Nal* (seven quantities of corn), and the cenote itself is referred to simply as *cheen*.

and from there a subterranean route continues to Mexico / Tenochtitlan, passing by *Uxmal*¹¹ in route. Mention should also be made of the celestial *cuxaan zum*¹² between *Zac Ii*¹³ (Valladolid), *Coba* and *Tulum*,^{14 15} said to be built by the *Itza Rey Macehualo*¹⁶ and wide enough for horsemen to ride upon while leading numerous armed men. The same celestial *cuxaan zum* between *Coba*, *Zac Ii* and *Ho*¹⁷ was cut by a Mexican force according to Jacinto May Hau of *Coba* (Folan 1975, Folan et al. 1983a, Miller 1974, Tozzer 1907). There also exists a celestial *zac be* or *cuxaan zum* between *Dzibil Chaltun*¹⁸ and *Itzmal* (Izamal),¹⁹ Yucatan, ostensibly traveled by the Virgin of the Immaculate Conception who apparently began her journey in the Cenote *X-Lah Cah*,²⁰ a sink hole at *Dzibil Chaltun* (Folan 1992a) dedicated principally to domestic use based on the cultural contents found in it, (Folan, personal observation 1958-1960) in spite of all its mythological relationships (Taschek 1994; see Newberry 1959 on its excavation).

Mythological, subterranean passageways are common features of folklore in Campeche and Yucatan. These passageways usually connect a

¹⁰Mouth of the Well of the Itza, from *chi* = mouth, *cheen* = well, and *Itza* = a Mayan group.

¹¹Meaning unknown. Cogolludo (1971:1/251) notes that an alternative name for *Uxmal* is *Uxumual*, and thus perhaps the name *Uxmal* is derived from *U Xul Muyal* = at the end of the clouds.

¹²Living rope, from *cuxaan* = living, alive, and *zum* = rope.

¹³White Hawk, from *zac* = white and *ii* = hawk. Over the front door of the cathedral facing the central plaza of *Zac Ii* there is a shield which has a representation of this bird.

¹⁴A wall or fortification made of dirt. Probably from *tul* = around and *luum* = earth.

¹⁵Tozzer (1941) gives the following information in note 908:
According to the folklore of the present Mayas, in the olden times there was a road suspended in the sky stretching from Tulum and Coba to Chichen Itza and Uxmal. This pathway was called *cuxan sum* or *sac be*. It was in the nature of a large rope (*sum*) supposed to be living (*cuxan*) and in the middle flowed blood. Tozzer (1907:153).

¹⁶The hispanified term *Rey Macehualo* = King of the peasant/indians, from the Spanish *rey* = king and the Nahuatl *maceualli* = peasant or vassal. In Mayan this term is *u rey mazeualoob*. In present-day Mayan *mazeual* is an alternative name for the Maya themselves.

¹⁷This is the present-day Mayan name for Mérida, and is derived from *Ich Caan Ziho*. See the footnote to *Ich Caan Ziho* above.

¹⁸Written Bedrock, from *dzibil* = written and *chaltun* = bedrock. The local Mayans refer to this site as *X-Lah Cah*, or "old/ruined town".

¹⁹This place name is generally referred to as *Itzmal* in Mayan documents and pronounced as such today. The place name is obviously related to the principal deity and temple built to him in this town, *Itzam Na*.

²⁰Old town, from *lah / lab* = old, rotten, and *cah* = town. As note in the footnote to *Dzibil Chaltun* above, *X-Lah Cah* is the name used by the local populace for *Dzibil Chaltun*. In Mayan documents this is probably the site of *Chable*, also referred to as *Lahun Chable*. See the note to Santa Ursula below.

minor site to a major center such as *Ich Caan Ziho* or *Uxmal*. For example, there exists a mythological underground passageway which begins at the Cenote *X-Lah Cah* of *Dzibil Chaltun* connected to the nearby town of *Chablekal*²¹ (Mardin 1958). This cenote is said to have been formed by a great thunderbolt sent by a deity (Folan 1970).²² The cenote supposedly has become a subaquatic shrine for Saint Ursula,²³ who represents the Moon Goddess of the Maya known as *Ix Tan Dzonot*²⁴ (Thompson 1976:244-245). The cenote is also a shrine for her sister La Concepcion Inmaculada and a child associated with a disease which produces reddish ulcers called *anal kak*²⁵ (Baez - Jorge 1988, Folan 1970, Thompson 1976:244-245). Music played in *Chablekal* is supposedly audible in *Dzibil Chaltun* by way of this much publicized passageway (Mardin 1958). There also exists a mythological subterranean passageway between the archaeological site of *Acan Muul*²⁶ (Pollock 1980), located within the territory of the Ejido de Chemblas²⁷ to the north of the City of Campeche, and *Uxmal* according to a

²¹As noted above, the original name for *Dzibil Chaltun* was probably *Chable*, and also *Lahun Chable* which means “ten *Chable*”, probably because the last *10 Ahau Katun* (1374) before the Spanish conquest was seated here. The function of the suffix *-kal* is unclear. *Kal* means “twenty” and “to close”.

²²Perhaps *Itzam Na*, but there is no confirmation that he himself had the power over thunderbolts.

²³Cogolludo (1971) confirms that Santa Ursula is the patron saint of *Chablekal*. Note that he spells the town’s name *Chable*. It is unknown when the suffix *-kal* was added to the name. Cog/His/I:302-303: El convento de Cumkal tiene cuarto lugar en la tabla del primer capitulo custodial del año de 1549. Es titular de su iglesia nuestro padre San Francisco; sus visitas son Santiago del pueblo <303> de Chicxulub (*Chic Xulub*), Santa Ursula del de Chablé (*Chable*), San Pedro Apóstol del de Chulul, y San Juan Bautista del Zicipach (*Zic Pach*).

²⁴She who is in Front of the Cenote / She who is in the Middle of the Cenote, from *ix* = female, *tan* = in front of / in the middle of, and *dzonot* = cenote or sink hole. For the two alternative meanings of *tan* see Motul I: Tan: la delantera de alguna cosa. / Tan: en composicion de algunas diones denota el medio.

²⁵An as yet unspecified skin disease. Roys translates *anal kak* as “a certain small ulcer” in *Ethno-Botany* (Roys 1931), and *chac anal kak* as “a small ulcer” in the *Bacabs* (Roys 1965), and translates *hobonte kak* which is given as an equivalent to *chac anal kak* in the *Bacabs* as “erysipelas”. Arzápalo (1987) concurs. *Chac anal kak* is given again on page 106 of the *Bacabs*, and Roys translates this as “red anal-kak ulcers”, with Arzápalo giving “Viruelas-rojo-encendido”.

²⁶There are, unfortunately, several meanings of the word *acan* as shown by the entries in the Motul I. The most common use of *acan* is the one which means “sigh / moan”, and thus the name of this site would seem to be “Moaning / Sighing Mound” perhaps associated with the sound of the chains according to our informant. However, perhaps this site was dedicated to the god *Acan*, the god of fermented drink (either *balche* or *ci*, or perhaps both), and thus the name would mean “*Acan*’s Mound”, which may refer to the inebriated witness to the above events. Not included in the Motul I is the plant *acan/acam* = *Orobanche* sp. (Roys 1931:213).

²⁷Probably *Cheen Blas*, or “the Well of Blas”.

belief collected in the early 1990's (José María Calan Zuc; personal communication 1992). The entrance of this feature, discovered by an intoxicated traveler returning to his house in *Nacheha*²⁸ from *Yaxca*,²⁹ is under the custody of a male deity-like individual called *H-Zahcab*,³⁰ who watches over a gold table with a young unnamed virgin dressed in gold upon it in a building close to the main pyramid of the site. *Kukul Can*³¹ is to be found beneath this table bound by a golden chain which did not, however, impede him from going to *Uxmal* through this passageway whenever there were festivities there. This site is also associated with large black cats with bows of different colors, and a slowly pulsating light associated with its principal structure from which a sound of rapidly dragged chains was heard, possibly the gold ones binding *Kukul Can*. Within the main structure, our informant has heard roosters and turkeys speaking like people as well as cattle conversing in human language.

A subterranean route between Copan, Honduras and Quirigua, Guatemala is also rumored to exist (Sedat, personal communication 1996) thus adding an international flavor to this type of linear feature.

ROADWAYS DESCRIBED IN THE COLONIAL DICTIONARIES

Some of the best sources for learning about Maya linear features are the early Colonial dictionaries written in Yucatan Maya by Franciscan friars in the late 16th and early 17th century (Bolles 2001). There are various entries in these dictionaries describing the linear features, sometimes in great detail. Here we will look at some of the material supplied by the colonial dictionaries and Mayan manuscripts and use it as our guide to a further understanding of these interesting features. At the same time we will try to relate archaeological features, both those already mentioned above as well as others, to their linguistic counterparts. These include both the raised stone or earthen filled roadways as well as those of other constructions described below. In this discussion the meaning and significance of terms *be tun*, *buth be*, *buthbil be*, *cochbaben be*, *chibal be*, *haban be* and *noh be* and their

²⁸Probably *Nachal Ha* = "Far Water".

²⁹There are several alternative meanings for this place name. *Yax* can mean both "green/blue" and "first". *Ca*, if the *a* is pronounced short or clipped, can mean "striped squash" (*Cucurbita* spp.), and by extension "skull", and "metate". If the *a* is pronounced regular and spelled *cah*, it can mean "town". It would seem most probable that *Yax Cah* = "First Town" / "Green Town", depending on the features of the place, is to be assumed as the correct reading, unless there is no town to be found at this site. In that case "Green Striped Squash" / "Green Skull" / "Green Metate" are the possible meanings.

³⁰He of the Cave, from *h-* = male and *zahcab* = cave and the white marl which is dug from caves. Here of course *zahcab* refers to the cave itself.

³¹Feathered Snake, from *kukul* = feathered and *can* = snake. Called *Quetzal Coatl* in Nahuatl.

relationship to *zac be* will be examined. Also to be discussed are the terms *xay be* or “fork in the road” and *hol can be* or “crossroads”, as well as the activities which took place at those junctions according to Maya Colonial literature such as the Books of Chilam Balam (Bolles 1978).

ARCHAEOLOGICAL EVIDENCE OF ROADWAYS DESCRIBED IN THE COLONIAL DICTIONARIES

As already mentioned above, the longest *zac be* so far discovered archaeologically in the Maya area is between *Coba*, Quintana Roo and its satellite, *Yaxuna*, Yucatan (Figure 1). This roadway, almost 100 km long, approximately 8 m wide, and generally about 50 cm high, is accompanied by a series of platforms described by Alfonso Villa Rojas (1934) in the early 1930's. It is a prime candidate for what the Spanish would have referred to as *camino real* and the Maya as *noh be*,³² defined as a long or principal roadway. An additional candidate for this type of roadway would be the one between *Coba*, Quintana Roo and *Ixil*, Yucatan,³³ of some 20 km in length, first followed and described by Jacinto May Hau, Nicolas Caamal Canche, Teoberto May Chimal, Lynda Florey Folan and William J. Folan. (Folan 1976, 1977a, Folan and Stuart 1974, Robles 1976) (Figure 1). This road seems to be a shorter version of the *Zac Be 1* going to *Yaxuna* and duplicates most of its notable features such as large ramps (Figure 3) adding in one case a fairly large platform associated with a vaulted building to a ramp located close to *Coba* (Figure 4). Numerous smaller ramps were distributed over the 20 km length of the *zac be*. The large ramp, its platform and vaulted building were referred to as a customs house by the *Cobaeños* who led us along the full length of the *zac be*.³⁴ These and other such roads probably defined the boundaries of the *Coba* urban area and the *Coba* regional state. (Folan 1976, Folan and Stuart 1974, Kurjack and Andrews 1976.)

Another candidate for the term *noh be*³⁵ would be the *calzada*

³²Big Road, from *noh* = big and *be* = road. This is generally glossed as “camino real” in the dictionaries.

³³The meaning of *Ixil* is unknown. This town of *Ixil* is 20 kms. southwest of *Coba* and about 35 kms. south of *Che Maax*. There is a second, better known town named *Ixil* which lies just north of *Cumkal* and *Chic Xulub*.

³⁴The structure on the ramp is probably a customs house. In the Motul I there is an official named *ah beelnal*: Ah beelnal; ah beelancil:} official de republica, como cacique, alcalde, regidor, ettza. The word *beelnal* can mean either “road keeper” or “office holder”. The suffix *-nal* is equivalent to “holder”, “keeper”. However, the word *beel* is more complicated, and has the following meanings: Beel: camino. / Beel: estado de vida. / Beel: obra /o/ ocupación. / Beel: officio de republica o de cualquier official. It would seem reasonable to assume that on heavily traveled roads such as the one from *Ixil* and *Yaxuna* to *Coba* there would have been a customs house as the road entered the territory of *Coba*.

³⁵As mentioned above, *noh be* is generally glossed as “camino real” in the early dictionaries.

mentioned by both Landa (1966)³⁶ and Lizana (1633)³⁷ which connects *Ich Caan Ziho* with *Itzmal*. This roadway is approximately 60 km in length. Between these two major sites is the Ruins of *Ake*,³⁸ through which this *calzada* apparently passed. Archaeological evidence gathered by Rubén Maldonado Cárdenas (1995, 1997) supports the existence of such a roadway between *Itzmal* and the Ruins of *Ake* (Figure 5). Beyond this, it is apparent from both Lizana (1633) and Cogolludo (1971)³⁹ that there was a network of roads throughout the Yucatecan peninsula Cogolludo refers to as *calzada* and *camino real*. For Cogolludo, the purpose of this network of roads was to bring pilgrims from places as far away as Tabasco, Chiapas, and Guatemala, to the port of *Ppole*⁴⁰ on the mainland across from the island of *Cuzamil*.

Another possible Mayan term for *camino real* is *chibal be*,⁴¹ glossed as the main road from which side roads branch out. There are several *zac beob* in *Coba* which fit this description (Folan et al. 1983a) as well as the *zac be* between *Uxmal* and *Kabah*⁴² followed by Victor Segovia Pinto

³⁶Landa (1966:109): Los segundos edificios que en esta tierra son más principales y antiguos - tanto que no hay memoria de sus fundadores - son los de *T-ho* (*Ich Caan Ziho*, or today *Ho*); están a trece leguas de los de *Izamal* (*Itzmal*) y a ocho del mar como los otros; y hay señales hoy en día de haber habido una muy hermosa calzada de los unos a los otros. Los españoles poblaron aquí una ciudad y llamáronla Mérida por la extrañeza y grandeza de los edificios, el principal de los cuales señalaré aquí como pudiere e hice (con el) de *Izamal* (*Itzmal*), para que mejor se puede ver lo que es.

³⁷While *Ich Caan Ziho* is not directly mentioned in the following paragraph by Lizana, it is not hard to surmise that the road going westward from the temple of *Kauil* would lead to the Ruins of *Ake* and then on to *Ich Caan Ziho*.

Lizana (1633:6v): Y este [templo] era el que está en la parte del puniente y, assí, se llama y nombra *Kabul*, que quiere dezir “mano obradora”. Allí ofrecían grandes limosnas, y lleuavan presentes y hazían romerías de todas partes. Para lo qual hauían hecho quatro caminos o calzadas a los quatro vientos, que llegavan a todos los fines desta tierra y passavan a la de Tavasco y Guatemala y Chiapa, que aún hoy [s]e ve, en muchas partes, pedazos y vestigios della. Tanto era el concurso que acudía a estos oráculos de *Itz[a]m [N]a T[h]ul* y *[K]abul*, que había hechos caminos.

³⁸There is no known meaning for this name. Some relate that an earlier name is *Aqu*. Perhaps then, using standard Mayan orthography, its original name was *Ac* = turtle or *Ak* = vine. Other meanings of both *Ac* and *Ak* are also possible.

³⁹See the earlier footnote in which Cogolludo (1971) talks about the roads leading to *Cuzamil*.

⁴⁰Meaning uncertain. Perhaps this name has to do with merchants. See Motul I: Ppolmal: mercader, tratar y contratar, comprar y vender.; and Ppolom .l. ah ppolom: mercader. The location of this port is not specified in the sources known to us, but probably is in or about Playa del Carmen.

⁴¹Literally “Linage Road”, from *chibal* = caste, linage, and *be* = road. See Motul I: Chibal: casta; linage. ¶ De aquí sale: v *chibal be*: camino grande, principal, y real respecto de los otros pequeños y sendas que salen del. ¶ *valkahen a chab v chibal be a ppatahe*: vueluete atras a tomar el camino principal y real que dexastes o que perdiste.

⁴²Meaning uncertain, perhaps due to a misspelling of the name.

(personal communication; 1962). There may be a reference to the kinship system in the use of the term *chibal be*, relating a large road with certain lineage associations, thus corroborating the existence of kinship links suggested for local and intersite *zac beob* of *Coba* (Folan 1975, Folan and Stuart 1974, Kurjack and Andrews 1976).

Yet another term given in the various dictionaries for the Spanish word *calzada* is *buth*, *buth be* or *buthbil be*, from the verb root *buth* meaning “to fill” and *be* meaning “road”, referring definitely to the type of road today referred to as a stone-filled *zac be*. In a few of the dictionary entries it may be surmised that this type of road is, in particular, that which crosses wet terrain such as the roadways through lakes and marshy areas at *Coba*, including the 6 meter wide *zac be* to *Ixil* which crosses a marsh. (Folan: personal observation). Another example of this type of road is *Zac Be 10* in *Coba*, a very low, difficult to follow roadway that connects *Zac Be 8* with Laguna *Zacal Puuc*⁴³ and *Yax Laguna*⁴⁴ according to its Carnegie discoverers (Thompson et al. 1932) and Jacinto May Hau (personal communication 1975) (Figure 2). This roadway includes sections which enter into and rise out of *sascaberas*,⁴⁵ the product of which may have been carried over this and other important *zac beob*. There exists a *zac be* filled with earth in *Calak Muul*,⁴⁶ Campeche (Folan 1991, 1992b and Folan et al. 1995a, 1995b) and another of oyster shells and earth in Tabasco, as reported by Ernesto Vargas (1985:102). Some apparently cross marshy places such as the Bajo de El Laberinto in *Calak Muul* where several *zac beob* still to be ground-truthed, are shown crossing this wide seasonal marsh between *Calak Muul* and El Mirador, El Peten, Guatemala in satellite imagery (Folan 1992b, Folan et al. 1995a,b). Guatemalan roadways are under investigation by Richard Hansen (1990 and 1994) and several other archaeologists including José Suasnavar (1994) as well as Julio A. Roldán (Roldán et al. 1991) in *Ixtoton*, Guatemala and surrounding areas.

Finally, for the word *calzada* there is the term *be tun*. It is apparent from both the Motul I and the Vienna dictionaries that *zac be* and *be tun* are considered synonymous.⁴⁷ As noted in the opening paragraphs of this paper, the term *zac be* is not found in the early historical works about Yucatan. From the dictionaries there is no indication that the term *zac be* should take precedence over any of the other terms listed here, and it may be mere chance that sometime in the late 19th century, when the word *zac be* seems to have first come into use in the historical literature on Yucatan, that the

⁴³White Hill, from *zacal* = white and *puuc* = hill.

⁴⁴*Yax* = green.

⁴⁵A hispanification of the Mayan word *zazcab* = cave and the marl or white earth derive from this cave. In colonial times this term was written *zahcab*.

⁴⁶Twin Hills, from *calak* = paired, twin, and *muul* = man-made mound or man-made hill.

⁴⁷See Vienna: *Calçada, camino enpedrado: be tun, çac be.*; and Motul I: *Be tun: camino o calçada de piedra. / Çac be: calçada o camino de calçada.*

term *zac be* was chosen over any of the various available Mayan terms.

Other terms which merit mention are *cochbaben be*, *haban be*, and *holocnac be*.

Cochbaben be means “wide road” and perhaps refers to the broad concourses at principal sites such as the ones at *Ake* (Rubén Maldonado Cárdenas 1995, 1997), *Xunan Tunich*⁴⁸ (Ashmore 2001), *Dzibil Chaltun* and *Chi Chéen Itza* (Cobos Palma 2001), and described by Scott Fedick (1996) in the *Yal Ahau*⁴⁹ region of Northern Quintana Roo, as well as the Chases (2001) in Caracol. The astronomically aligned *zac be* at *Dzibil Chaltun* (Coggins and Drucker 1988) is 20 m wide. It connects the building cluster in front of the Temple of the Seven Dolls to the plaza in the middle of the building complex around the Cenote *X-Lah Cah* (Andrews IV and Andrews V 1980). The *zac be* then continues to the west towards another similar cluster of buildings without passing through the Central Plaza. The *zac be* at *Chi Chéen Itza* goes from the plaza on the north side of the Temple of *Kukul Can* to the Cenote Sagrado⁵⁰ (Folan 1977b). There are also broad concourses at the ruins of *Nak Be*⁵¹ and *Tikal*,⁵² Guatemala, which might be classified as *cochbaben be* (Gómez Barilles 1995, Hansen 1991).

Haban be may refer to a “bush road”, which one would refer to today as a wide *brecha* in Campeche, while *holocnac be* means “open road” with vegetation removed. Perhaps a portion of the road network described by Cogolludo consisted of this type of roadway, since vestiges of roadways made with raised roadbeds are yet to be found in the abundance suggested by him.

Among the lesser roads we have *chux be*,⁵³ *ek be*,⁵⁴ *luth be* / *luluth be*,⁵⁵ and *thuthul be*⁵⁶ meaning pathways that may be represented by some

⁴⁸Woman Rock, from *xunan* = woman and *tunich* = rock.

⁴⁹There appears to be two possible meanings for the name *Yal Ahau*: Water of the Ruler, from *aal* = drinking water and *ahau* = ruler, or The Child of the Queen, from *al* = child of a female, and *ahau* = ruler. In the later case, since the name is *Yal Ahau* and not *Mehen Ahau*, the ruler is assumed to be female.

⁵⁰Landa (1966:113-114): Tenía delante la escalera del norte (of the Temple of *Kukul Can*), algo aparte, dos teatros de cantería, pequeños, de cuatro escaleras, enlosados por <114> arriba, en que dicen representaban las farsas y comedias para solaz del pueblo. Va desde el patio, enfrente de estos teatros, una hermosa y ancha calzada hasta un pozo (que está) como a dos tiros de piedra.

⁵¹Abutting the Road, from *nak* = abut and *be* = road.

⁵²Meaning unknown. Perhaps *Ti Kal*, meaning “At Twenty” or “At the Closure”. Note that *Chablekal* also has the word *kal* in it.

⁵³Narrow Road, from *chux* = narrow and *be* = road.

⁵⁴Dark Road, from *ek* = dark, black, and *be* = road, so-called because the pathway is closed in by vegetation and thus dark.

⁵⁵Apparently from *luth* meaning to jump, to lope, or to trot, and thus a pathway which has not been cleaned of impediments causing the user to trot or jump along the pathway.

narrow, raised features in *Calak Muul* and *Coba* in the form of walkways or bush trails.

One interesting feature of some *zac beob* for which a term has not been found in the Colonial dictionaries and literature is the dividing line down the middle of some *zac beob* such as the one from *Coba* to *Ixil* (Folan 1977a, Robles Castellano 1976, Folan and Stuart 1974).

ROADWAYS WHICH ARE PRESENTLY UNDERWATER

There have been recent discoveries of roadways in tidal areas now underwater. It must be surmised that there has been a change in the sea level, perhaps as much as a couple of meters, since these roadways were built (Folan et al. 1983b, Tanner 2000). An example of these roadways are the *zac beob* discovered by Sophia Pincemin (1993), Alfred Siemens et al. (1996) and Ernesto Vargas (1997) in and around *Itzam Kanac*⁵⁷ (Figure 1). Some of these features which cross the Rio Candelaria are similar to the *zac be* which cross Lake *Macan Xooc*⁵⁸ at *Coba* (Folan et al. 1983a, Thompson et al. 1932) (Figure 2). Another major linear feature is located at the mouth of the Rio Candelaria and Laguna Panlao,⁵⁹ (Eaton and Ball 1978, Vargas 1997) along with what are described by Siemens et al. (1996) and Vargas (1997) as eight check dams crossing the river at various points which could also have served as bridges. These features are much larger than the small bridge excavated by Maria del Rosario Dominguez (1991-1992) in association with the *zac be* crossing a canal between two aguadas in *Calak Muul* (Figure 6) but smaller than the prehispanic bridge which may have crossed the Usumacinta River at *Yax Chilan*,⁶⁰ Chiapas. Mention should also be made of the *zac be* and defensive works associated with Isla Cerritos excavated by Anthony Andrews and collaborators (Andrews and Gallareta 1986, Andrews

⁵⁶Narrow Road, from *thul* = narrow and *be* = road. This is still a common term in use today.

⁵⁷The correct meaning of *Itzamkanac* is unknown. From the dictionaries we see that *itzam* = lizard and *kanac* = *Alchornea latifolia* Swartz. Scholes and Roys (1968:64) have this comment: "We are unable to translate *Itzamkanac*. *Itzam*, which means "lizard", was also an element of the name of the Yucatecan sky god, *Itzamna*, and in Maya art generally the sky is represented by a snakelike lizard monster with a band of astronomical symbols along its body. As yet, however, we have found no mention of *Itzamna* either among the Acalan or in Tabasco." It should be remembered, however, that Lizana (1633) states that pilgrims came from "Tavasco y Guatemala y Chiapa" to *Itzmal*, thus implying that the people of Tabasco were well aware of the god *Itzam Na*.

⁵⁸Perhaps "Covered Shark", from *macan* = covered and *xooc* = shark.

⁵⁹It can not be determined if this is a Mayan word, or perhaps a Chontal or Nahuatl word. If the former, it is misspelled. There is no word which approaches the spelling *Panlao* in the various Nahuatl dictionaries.

⁶⁰Green Prophet or alternatively First Prophet. See Motul I: *Yax .i. yayax: color verde. / Yax: en composicion de nombre; cosa primera., and Chilan than; chijlan .i. ah chijlan:} interprete o naguatato.*

et al. 1988). These features are now under water due to sea level rise (Folan 1987b), usually associated with climatic change (Alvarez Aguilar 1985, Folan et al. 1983b, Gunn and Folan 2000, Tanner 2000). *Xel Ha*⁶¹ also exhibits similar features such as a jetty-like *zac be* connecting an island to the peninsula and a defensive wall (Miller 1982, Figure 108) (Farris, Miller and Chase 1975).

CROSSROADS AND FORKS IN THE ROAD

The Mayan Colonial literature, particularly the Books of Chilam Balam, makes several references to particular features associated with *zac be* where various types of activities took place (Bolles 2001). One of the more common terms is *xay be* referring to a fork in a road such as the junction of *Zac Beob* 6 and 7 leading to *Pak Cheen*⁶² and *Caanal Kaax*⁶³ in *Coba* (Figure 2). There are various other examples of forks in the road at *Coba*. Related to the term *xay be* are the terms *hol can be* which is a crossroad, and *hol can heleb* and *hol can lub* referring to a resting place at the crossroads.

It is a common practice to have resting places or *lub* built where paths converge in the Northern Maya area. These resting places are normally tables built out of stone positioned so that a traveler carrying a load with a tumpline can back up to the table and lower the load onto the table without having to squat down. Although something such as these resting places would seem difficult to locate archaeologically, it would appear that one example may exist in *Coba*. It is at the juncture of *Zac Beob* 8 and 13 where a large flat stone is found (George Stuart, personal communication 1997) (Figure 2).

The existence of these crossroads should be of interest to those who have worked in *Coba* because it is at *Coba* where one of the most elaborate crossroads exists, formed by a raised platform with a very small shrine on top and a fallen stela fragment on its north side. This crossroad is reached by four ramps at the junction of *Zac Beob* 1 and 3 and is a short distance from the major Group B built along the shores of Laguna *Coba* and *Macan Xooc* (Figures 2, 7).⁶⁴

In the majority of the references to crossroads and forks in the road

⁶¹Parted Water (?), from *xel* = to part and *ha* = water. Perhaps this name has been mispronounced, and comes from something like *X-Chel Ha*, the Water of *Ix Chel*. In any case, Motul I gives *xel* as follows: *Xel.ah,eb: despedaçar o partir con la mano o cuchillo pan, frutas, carne.*

⁶²Well Wall, from *pak* = wall and *cheen* = well.

⁶³High Forest, from *caanal* = high and *kaax* = forest.

⁶⁴Even today on a variety of roads and pathways there are shrines set up at juncture points. Some of these shrines appear to be just a pile of rocks, but the form of the guardian deity of the area can be discerned, or at least imagined, in the shape of the rocks. A good indication of whether the pile of rocks is a shrine and not a *lub* (resting place, as mentioned above) is whether there is residue of offerings on the rocks, for example candle wax and such.

in the Books of Chilam Balam a statement is made that houseflies and blue-tailed flies shall cry at the crossroads. While never explicitly stated, it seems that the intent of these phrases is that ambushes will take place at the crossroads or at forks in the road resulting in the gathering of houseflies and blue-tailed flies to feed and lay their eggs on the corpses resulting from armed conflicts. There is a statement in the *Bocabulario de Maya Than de Viena* (1993) which would seem to support this notion, as it lists in an entry the phrase “*reñir a la encrucijada*” or “fighting at the crossroads”.⁶⁵ If what the Colonial Mayan literature tells us is related to reality, it should be possible to locate indications of some sort of armed conflict at these road junctions in the form of projectile points and related artifacts or even fragments of human bone as the end product of the rotten corpses described above.

SWEEPING OR MAINTAINING THE ROADS

Another subject of interest is the question of what is the real meaning and function of *miz be* (sweep the road) and related activities having to do with “sweeping” of public places: *miz lub* (sweep the leagues / resting place), *miz luum* (sweep the land), *miz kiuic* (sweep the plaza), and *miz peten* (sweep the region). According to Muñoz Camargo, the meaning of the month name *Ochpaniztli*⁶⁶ which begins on September 18th is “sweep the roads.” It would seem that the idea of sweeping the roads, at least in the Mexican highlands, had a definite time when this activity takes place. So far in the Mayan sources no indication has been found stating that this activity takes place at a certain time of the year. That is to say, it would seem that like so many other activities in an agrarian society it makes sense that this activity should occur at a specific time of the year, and is not an activity which occurs randomly throughout the year. A search has been made through the Mayan texts themselves for more specific information. There is, however, nothing specific said about this activity, not even when it should take place.⁶⁷ As is the case when we say “leap year”, and expect the listener to know what we mean, it seems that just the mention of the activity is considered sufficient information for the reader and that a more thorough explanation is not necessary.

The term *u matan miz be*⁶⁸ refers to a section of road to be swept and

⁶⁵Vienna 88r: Encrucijada de caminos: u katil be, u xay be .l. u xayal be. ¶ Ydos a reñir a la encrucijada: xenex ti xay be ti oc yail.

⁶⁶*Ochpaniztli*, it seems, has to do with *otli* = road and *tlachpanaliztli* = the action of sweeping, from which somehow the word *ochpantli* = camino ancho y real (Molina 1970) is derived.

⁶⁷In her book *Ritual Humor in Highland Chiapas* (1984, pp.112-114) Victoria Bricker talks about the Chamulas sweeping the marketplace, churchyard, and road to Calvary Hill in preparation for Carnival. This happens in February on the Friday prior to Carnival.

⁶⁸The charity of sweeping the road, from *matan* = alms, charity, *miz* = sweep, and *be* = road.

cleaned of weeds by a particular town, barrio, or person. This statement not only reminds one of a type of civic duty still carried out in Acambay, State of Mexico (Folan, personal observation, 1974) but the fact that roads were probably built based on sections assigned to a group of individuals. Such might be the case for the *Ma Chucaani*⁶⁹ *Zac Be 26* in *Coba*, where only some sections of one stretch of this *zac be* was made with a raised roadbed, leaving spaces in between them (Benavides Castillo 1976, Folan and Stuart 1974) (Figure 2). A similar situation was observed in the construction of a modern road from *Kaax* (Tekax)⁷⁰ to *Becan Cheen*,⁷¹ Yucatan in 1960, resulting in some sections of the road being completed before others, thus leaving empty spaces on the road that, in this case, were later filled in by teams of pieceworkers (Folan 1969, personal observation 1960).

On a much larger scale, Rubén Maldonado Cárdenas (1995, 1997) informs us that the principal *zac be* from *Itzmal* to *Ake* was originally missing a section from *Zit Pach* (Sitpach)⁷² to *X-Em Na* (Xemna)⁷³ (Figure 8). This section of the *zac be* was added much later (Figure 5). Similarly, a beginning section of the *zac be* between *Uci*⁷⁴ and *Kan Zahcab*⁷⁵ was at first

See the Motul I:

Matan miz be: la parte que cabe de barrer y limpiar del camino a algun pueblo o parcialidad o persona. ¶ a matanex miz be lo: esto es lo que os cabe de limpiar de vuestra pertenencia.

The Motul II has these two related entries:

Parte o pertenencia de camino que caue a cada pueblo para limpiar: v kochol miz beil; v matan miz beil.

Pertenencia o parte del camino que cada lugar esta obligado a limpiar: v kochol miz beyl; v matan miz beil.

⁶⁹*Ma chucaani* means “incomplete”.

⁷⁰*Kaax* = “forest”. For some reason which remains unclear the Spanish, in compiling place names, would often add the locative adverb *ti / te* to a place name. The *te* in *te Kaax* is such a locative. Other examples of place names with *ti / te* are *Ticul*, *Tepakan*, *Teabo*, etc., which in fact in Mayan are *Cul*, *Pakan*, *Ab*, etc.

⁷¹Well in a Ravine, from *becan* = ravine and *cheen* = well.

⁷²This is not the same as the town *Sitpach* about 5 km. east on *Chulul* and 5 km. south of *Cumkal*. While this place name is given as *Sitpach* in the modern maps, it is clear both from the *Chumayel* and *El Documento de Yax Kukul* that its Mayan name is *Zic Pach*. The meaning of *zic pach* is unclear. These two places are not to be confused with *Sitilpech* (perhaps *Dzitil Pech* = “jumping tick”) which is about 6 km. east of *Itzmal*.

⁷³This place name is unregistered in the Colonial dictionaries and literature. The verb root *em* means “to descend”, and appears in the place name *Emal*. *Na* could either mean “house” or “mother”, depending on pronunciation.

⁷⁴The meaning of the root word *uc* is unknown. Perhaps *uki*, the past perfect of *ukul* = to breakfast / to drink is meant. This consonant shift would be consistent with the shift which occurs in the better known place name *Uku* which is spelled on Spanish maps as *Ucu*. An alternative meaning of the root word *uk* is louse.

⁷⁵Yellow Cave / Yellow Marl, from *kan* = yellow and *zahcab* = cave, marl. This town is often given in the present-day maps as *Cansahcab*.

missing between *Kancab*⁷⁶ and *Ucan Ha*⁷⁷ (Figure 9). It was later added on (Figure 10).

According to Landa, it was on the cleaned roads during the *Kan*⁷⁸ years associated with the bacab *Ah Can Tzic Nal*⁷⁹ that an image of *Chac Uayab Haab*⁸⁰ was carried to the east, which is the world direction for the *Kan* years, ostensibly to the limits of a village marked by a pile of stones now referred to as *ppic tun* in Maya and *mojoneras* in Spanish.

DEITIES ASSOCIATED WITH ROADWAYS

Several mythological personages have been associated with roadways. Generally speaking some manifestation of the goddess *Ix Chel* is considered as the guardian of these personages. One of these manifestations is *Ix Zac Beeliz* or “she who walks the white road.” Although *Ix Zac Beeliz* is considered to be the maternal grandmother of the rain god *Chac*,⁸¹ it is *Ix Chel* herself depicted in a mural in *Tulum* as carrying two small images of *Chac* according to Sabloff and Rathje (1975). She seems to be walking on some type of leveled area which may be a real or mythological roadway (Figure 11). In the Motul I the Milky Way is glossed as *Tamacaz*.⁸²

In *Coba*, the deity *Chiribias*, also known as the Virgin de Guadalupe and *Ix Chebel Yax*,⁸³ with her husband *Itzam Na*,⁸⁴ who lives in Lake *Coba*

⁷⁶Yellow Earth, from *kan* = yellow and *cab* = earth. See Motul I: *Kancab*: vna tierra vermeja.

⁷⁷Again the meaning of the root word *uc* is unknown. If the correct pronunciation of the name is *Ukaan Ha* then this means “soaked with water”. See Motul I: *Ukaan*: cosa que esta cundida como mancha o ponçoña o la fuerça del vino. The family name *Ucan* is a common name in Yucatan.

⁷⁸Note that Landa (1966) shifts the year bearers in relationship to the world direction colors one quadrant counter-clockwise, and thus gives the *Muluc* in place of *Kan*. Tozzer (1941) talks about this discrepancy in various notes. For the year *Muluc* see note 687.

⁷⁹Four Honored Corn (?), from *ah* = male, *can* = four, *tzic* = honor, revere, and *nal* = corn.

⁸⁰Red Year Ending, from *chac* = red and *uayab haab* = the last five days of the Mayan annual calendar. *Chac* or Red is the color to the East, the color of the *Kan* years.

⁸¹There is no discernable difference in pronunciation (for us in any case) between *chac* = rain / rain god, *chac* = red, and *chac* = great, big.

⁸²Motul I: *Tamacaz*: el camino de santiago o la via lactea.

⁸³The true meaning of the names *Chiribias* and *Ix Chebel Yax* are unknown. Cogolludo (1971:I/247) states that *Chiribirias* (note the difference in spelling) is the Mayan name for the Virgin Mary. Barrera transforms Cogolludo’s *Chiribirias* to *Ix Chebel Yax*, perhaps based on Landa and Cogolludo both noting the existence of such a goddess, but the Barrera reading presupposes that the second syllable *ri* in *chiribir* is not valid. The *i*’s in Cogolludo’s name and the common substitution of *r* for *l* would make one think that perhaps the name might be *Ix Chilibil Yax*, where *chilib* = twig. However, the word *cheeb* = strong, so perhaps *Ix Chebel Yax* is correct. In the passage about *Chiribirias* Cogolludo notes that *Ix Chel* is the mother of *Chiribirias*, whereas in the passages where Landa and Cogolludo mention *Ix Chel*

in the form of an alligator, are related to *zac beob* strongly associated with water (Folan 1992a). This is also the case of the Cenote Sagrado of *Chi Cheen Itza* probably associated with *Chac* as well as *Itzam Na* (Folan 1968). Additionally, *Chi Cheen Itza*, laid out according to the dictates of the *Popol Vuh*, is also strongly related to the Enchanted Twins, *Hun Ah Pu*⁸⁵ and *X-Balan Qué*,⁸⁶ and the Underworld, *Xibalba*,⁸⁷ supposedly located under the Great Ball Court (Folan 1980 and 1987). This is the dwelling place of the Lords of the Underworld, depicted on the sides of the Ball Court engaged in a game using the head of *Hun Ah Pu* as the ball. Also depicted is a hallucinogenic tree whose leaves are smoked in the form of a cigar by the contemporary Maya, according to Barba Ahuatzin de Piña Chan and Celso Gutierrez Baez (1997) and Fausto R. Del Angel Tafoya (personal communication, 1996). This perhaps explains the source of the material in the cigars smoked by the Enchanted Twins on their journey through the Underworld, explained in part by the above authors.

Also, according to one of us, a mythological passageway between the Cenote Sagrado and the Cenote *X-Toloc*⁸⁸ passes beneath the Temple of *Kukul Can* (Folan, 1980, 1987). It is here that the Enchanted Twins took a turn to the west on the black road to continue their journey. There is also a *zac be* between the Temple of the High Priest's Grave with its feathered serpents, a graphic representation of *Kukul Can* on its balustrades and the Cenote *X-Toloc* (Cobos Palma and Winemiller 2001).

We can thus surmise that not only the Enchanted Twins, but *Kukul Can* and *X-Quic*,⁸⁹ the mother of the Enchanted Twins are associated with cenotes and *zac beob* of both a subterranean and terrestrial nature, especially since Villa Rojas (1934) informs us that it is the King *Ucan*,⁹⁰ probably an abbreviation of *Kukul Can*, who built the *zac be* between *Coba* and *Yaxuna*.

and *Ix Chebel Yax* together no relationship is ascribed between the two. It would thus not be surprising to find out that *Ix Chebel Yax* and *Ix Chilibil Yax* are two distinct deities. It should be noted that neither name is attested in the Mayan colonial literature.

⁸⁴Lizard House, from *itzam* = lizard, crocodile, and *na* = house.

⁸⁵Quiche for One Blow Gun Hunter, from *hun* = one, *ah* = male, and *pu* = blow gun.

⁸⁶Quiche for Little Jaguar Deer, from *x-* = little, *balan* = jaguar and *qué* = deer.

⁸⁷In Quiche Maya *xibalba* means the underworld whereas in Yucatec Maya *xibalba* means the ruler of the underworld himself. In Yucatec Maya the name of the underworld is *mitnal*, or today *metnal*, probably derived from the Nahuatl term *mictlan*, from *micca* = dead and *-tlan* = place of.

⁸⁸Roys (1931): An ash-colored lizard with a crest on its head.

⁸⁹Quiche Maya: "blood of a woman" or perhaps "little blood", from *x-* = female or little, and *quic* = blood. According to Edmonson (1971), *X-Quic* is the daughter of *Cuchuma Quic*, one of the lords of *Xibalba*, and was impregnated by the head of *Hun Hun Ah Pu* spitting into her hand, resulting in the birth of the Enchanted Twins *Hun Ah Pu* and *X-Balan Qué*.

⁹⁰The meaning of this name is unknown. See footnote 77 above which looks at the name *Ucan*.

Kukul Can also shows up in relationship to the underground route between *Acan Muul* and *Uxmal* and between *Mani*⁹¹ and *Ich Caan Ziho*. It is here where he was accompanied by *X-Nuc Mani*,⁹² a mythological female who will pass out little nut shells of water in exchange for children when the end of the world comes (Burns 1983). It should be also noted that there seems to be an association between child sacrifice to *X-Nuc Mani* and the child seen in the Cenote in *Dzibil Chaltun* as well as child sacrifice in the neighboring Open Chapel where a child was left on the altar ostensibly as an offering, according to local beliefs (Folan 1970). *X-Nuc* is also associated with the route from Chan Santa Cruz to the Rio Hondo passing through the town of *Noh Bec*,⁹³ where she and two *kakaz baalob*⁹⁴ as well as the *Bob*⁹⁵ live, according to Valentina Vapnarsky (1995).

Also of great interest to us are the mythological characters associated with crossroads and resting places. Ralph Roys (1965) has informed us of an *Ix Hol Can Be* or “lady opening-at-the-four-roads” or crossroads listed in an incantation for traveler seizure that may be related to *Ix Chel* in her form as the *Ix Tabay*, as well as *Cit Hol Can Lub* referring to “father-opening-at-the-four-roads” or crossroads.

⁹¹Meaning unknown. Some suggest it is related to the verb *mani* = he/she/it passed by.

⁹²Old Woman of *Mani*, from *x-* = female, *nuc* = old, and *Mani*.

⁹³Big Oak, from *noh* = big and *bec* = oak (*Ehretia tinifolia* L.). The town of *Noh Bec* is about half way between Chan Santa Cruz (Felipe Carrillo Puerto) and *Bak Halal* (Bacalar).

⁹⁴Evil things, from *kaz* = evil and *baal* = thing.

⁹⁵Unfortunately, none of the dictionaries have an entry for this cat. It is evident as can be seen in the below entries from the Books of Chilam Balam that the *bob* is in the same category as *balam* (jaguar), *bolay* (unspecified large cat), and *coh* (puma).

d196 u balamil cab chac bolay, chac bob, yetel zac bob

j294 tu kin yan u chibaltamba balam yetel chac bob yetel coh

j296 buluc ahau u kin u nichlin coo yetel lach lam pach balam yetel chac bob

OBSERVATIONS

Many of the major roadways of the ancient Maya in northern Yucatan usually start out as unimpressive structures, as in the case of the *zac beob* of *Coba / Yaxuna* and *Coba / Ixil*, but become more impressive as they progress. This progression is analogous to the analysis of the various types of roads of the Maya. Many people have come to regard *zac be* only as roadways used for ceremonial, commercial, or militaristic purposes at one time or another, or as a way of linking kinship groups as in the case of the celestial and terrestrial *zac beob* be as shown in our early work in *Coba* (Folan 1975). However, we are also discovering that they are associated with many different mythological personages, particularly with *Ix Chel* and her alternate guises and with *Kukul Can*, *X-Nuc* and her neighbors. Secondly, *zac beob* are associated with the *Chacoob*, *Itzam Na*, and the Enchanted Twins, as well as with *X-Quic* who was probably related to the virgins who were supposedly lowered into the Cenote Sagrado with the hope of receiving a message from the gods regarding prognostications of the year to come (Folan 1980, 1987).

We have also learned from the dictionaries that certain types of activities take place in certain parts of a *zac be*, some of which can be confirmed archaeologically. Also of importance is the notice of the term *c□ibal* which denotes family or other societal relationships.

From our preliminary work in and around *Calak Muul*, it would seem that discoveries of roadways are just beginning. Although only a few years ago no intersite *zac beob* had been reported in the *Peten*⁹⁶ of Campeche and Guatemala, recent discoveries have proved otherwise. We must remember, however, that fieldwork as well as ethnographic and linguistic efforts not only compliment but also give life to those right-of-ways of the ancient Maya, touching upon many aspects of their sociopolitical and mythological organization.

⁹⁶*Peten* = region, district, province.

RESUMEN

La evidencia arqueológica para la existencia de caminos prehispánicos en el área Maya es bien documentada. Estos caminos incluyen calzadas anchas encontradas dentro de muchas ciudades mayas, otros caminos elevados entre ciudades además de banquetas cortas entre grupos habitacionales. En los diccionarios coloniales de Maya-Español y Español-Maya escritos por los Franciscanos a los fines del Siglo XVI y los principios del Siglo XVII, existen varias definiciones de una variedad de caminos. Estos ejemplos fueron localizados en una búsqueda de revisiones computerizadas de los diccionarios. Complementando estas referencias es la información sobre caminos en varios documentos escritos por los historiadores Franciscanos además de los escritos por los Maya. Información también fue localizado por medio de búsquedas de versiones computerizadas de estos documentos.

Los diccionarios que han sido capturizados en computadores son el *Bocabulario de Maya Than de Viena*, *Calepino Maya de Motul*, *Vocabulario en la Lengua Maya* (frequentamente llamado el *Motul II*) y el *Vocabulario Muy Copioso en Lengua Española e Maya de Yucatán* que son copias del trabajo de Fray Alonso de la Solana; el *Ticul* que es una versión corrompida del trabajo de Solana y la porción *Maya-Español del Diccionario Maya de San Francisco*. Los textos Mayas que han sido computarizados incluyen porciones de los *Libros de Chilam Balam*, y el *Ritual de los Bacabs*, varios documentos como los *Títulos de Ebtun* y el *Documento N.1 del Deslinde de Tierras en Xkukul, Yucatán*; varios textos médicos y otros demás. Los trabajos capturados por computadora gracias al apoyo de FAMSI son la *Relación de dos entradas que hice a la conversión de los gentiles ytzaex*, y *cehaches* de Avendaño, *Yucatán o sea Historia de Esta Provincia* de Cogolludo y la *Relación de las Cosas de Yucatán* del Obispo Diego de Landa.

La meta principal de este trabajo ha sido de examinar las varias referencias pertinentes en estas fuentes para amplificar nuestro entendimiento de los caminos arqueológicos de los mayas.

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The authors would like to thank Victoria Reifler Bricker and Arlen and Diane Chase for their efforts in reviewing the manuscript for *Ancient Meosamerica* and making various useful observations and comments.

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language, Francisco Burgos Cen of Piste, Yucatán, who over the years has continued to give him insights into Mayan farming practices in particular and Mayan life in general. He also wishes to recognize Emiliano Poot Chim of Kom Cheen, Yucatán, who with patience and understanding has been able to add to this knowledge, and who, by frequently inviting Bolles to accompany him into the forest to his milpa taught him the meaning of the various features to be found on the pathways around Kom Cheen. Bolles also wishes to thank his wife Alejandra who has worked with him over the years to formulate a 380+ page grammar of the Mayan Language.

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- n.d So named because the dictionary was taken from the library of the Convent of San Francisco of Merida when that convent was disbanded in the 1820's. The dictionary consists of a Mayan-Spanish section and a Spanish-Mayan section, this latter being a third copy of the Solana dictionary (see Solana). The dictionary itself is now lost, but a copy was made by Pérez in the late 1850's or perhaps early 1860's. This copy is presently in the Middle-American collection at Tulane University.
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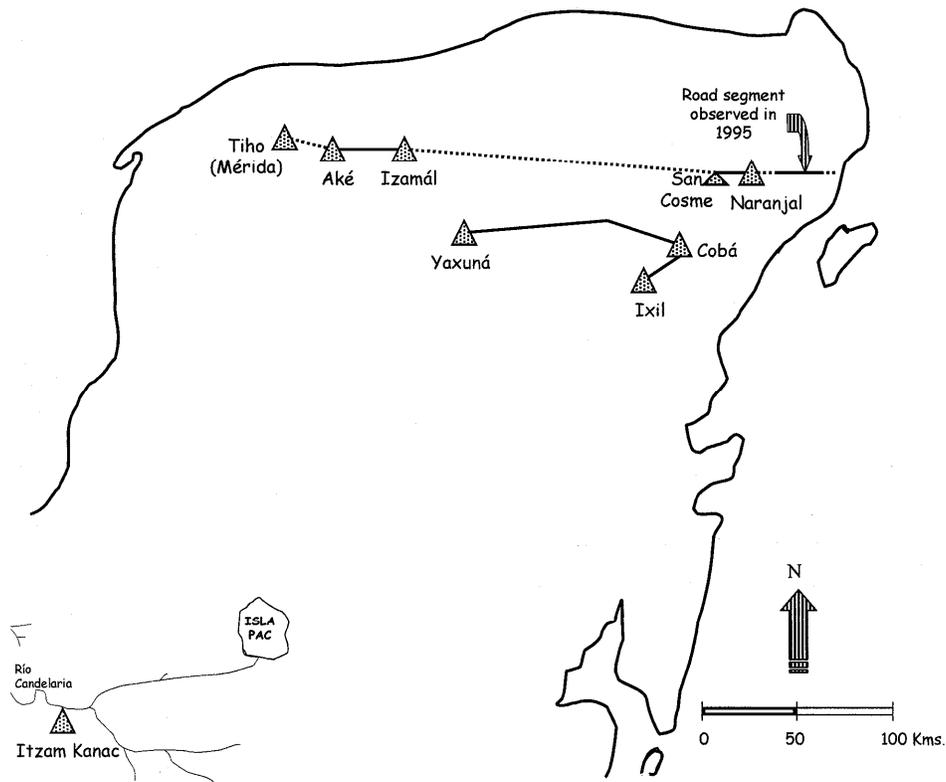


Figure 1. The 99km long *zac be* between *Coba*, Quintana Roo and *Yaxuna*, Yucatan and the *zac be* between *Coba*, Quintana Roo and *Ixil*, Yucatan. Also shown is the *zac be*, in part ground tested and in part still mythological between *Ho* and *Cuzamil* (Cogolludo 1974, Fedick 1996, Folan and Stuart 1974, Ispording 1975 and Villa Rojas 1934). The location of *Itzam Kanac*, Campeche is also indicated. This and other illustrations accompanying this chapter have been redrawn by Juan José Cosgaya Medina.

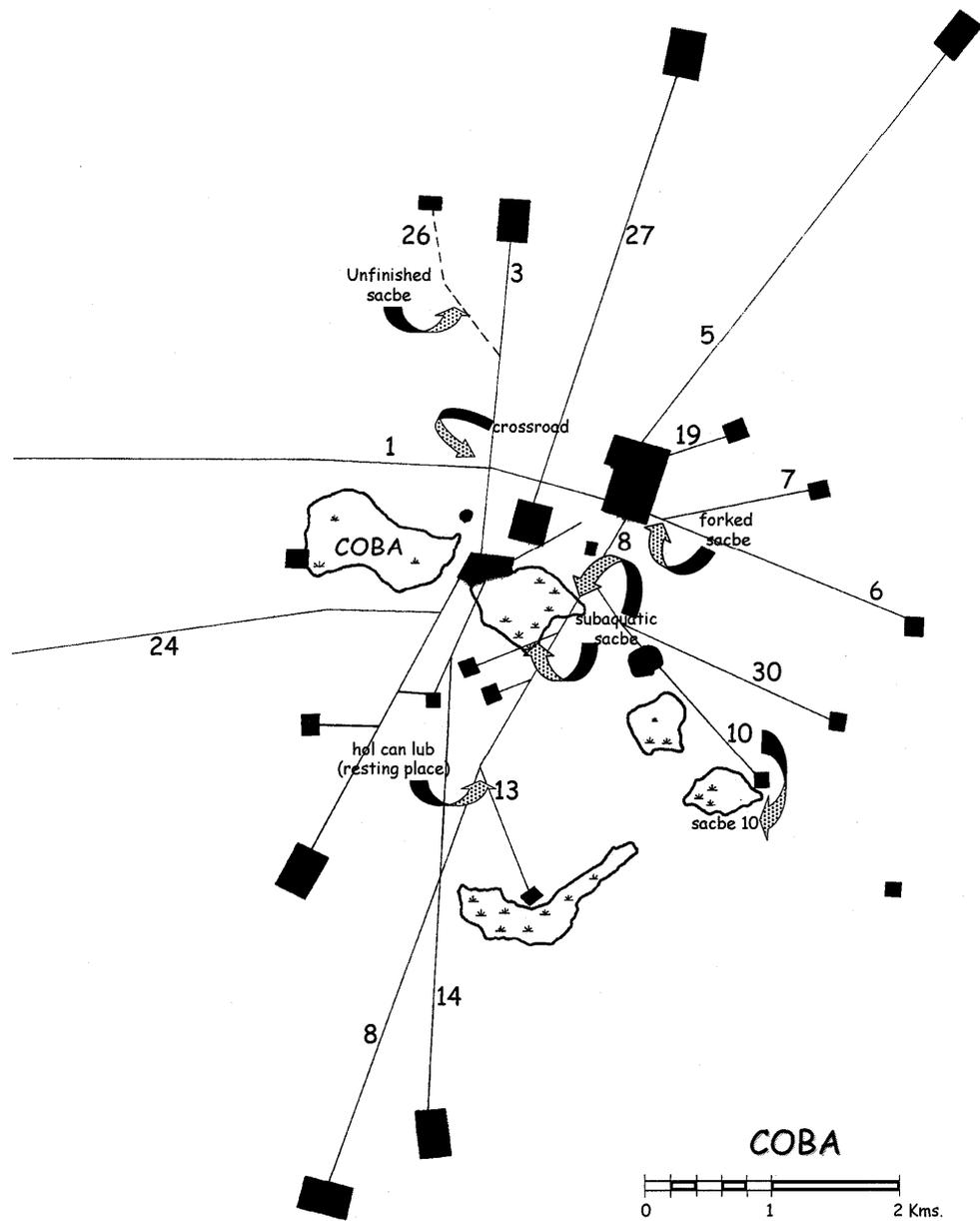


Figure 2. The *zac beob* of Coba, Quintana Roo showing the location of their different features. Original drawing by George E. Stuart. (Redrawn from Folan et al. 1983). Computerized version by Juan José Cosgaya Medina.

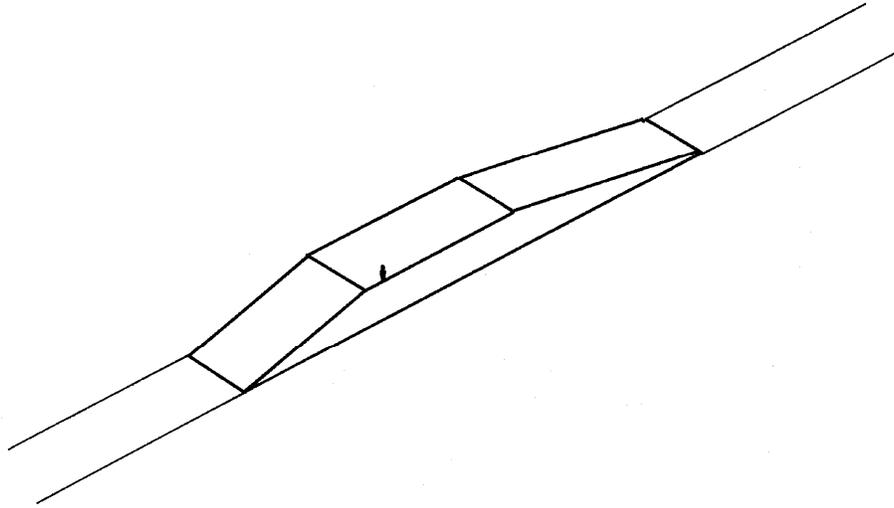


Figure 3. Large ramp located on the *Coba-Ixil zac be* near the outskirts of *Coba*. No scale. (Redrawn from Folan et al. 1983).

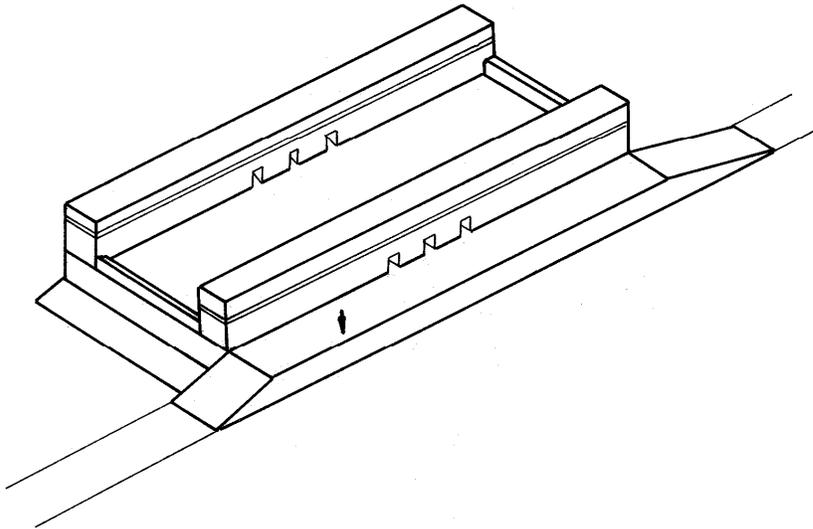


Figure 4. Large ramp with associated architecture located on the *Coba-Ixil zac be* outside *Coba*. No scale. (Redrawn from Folan et al. 1983).

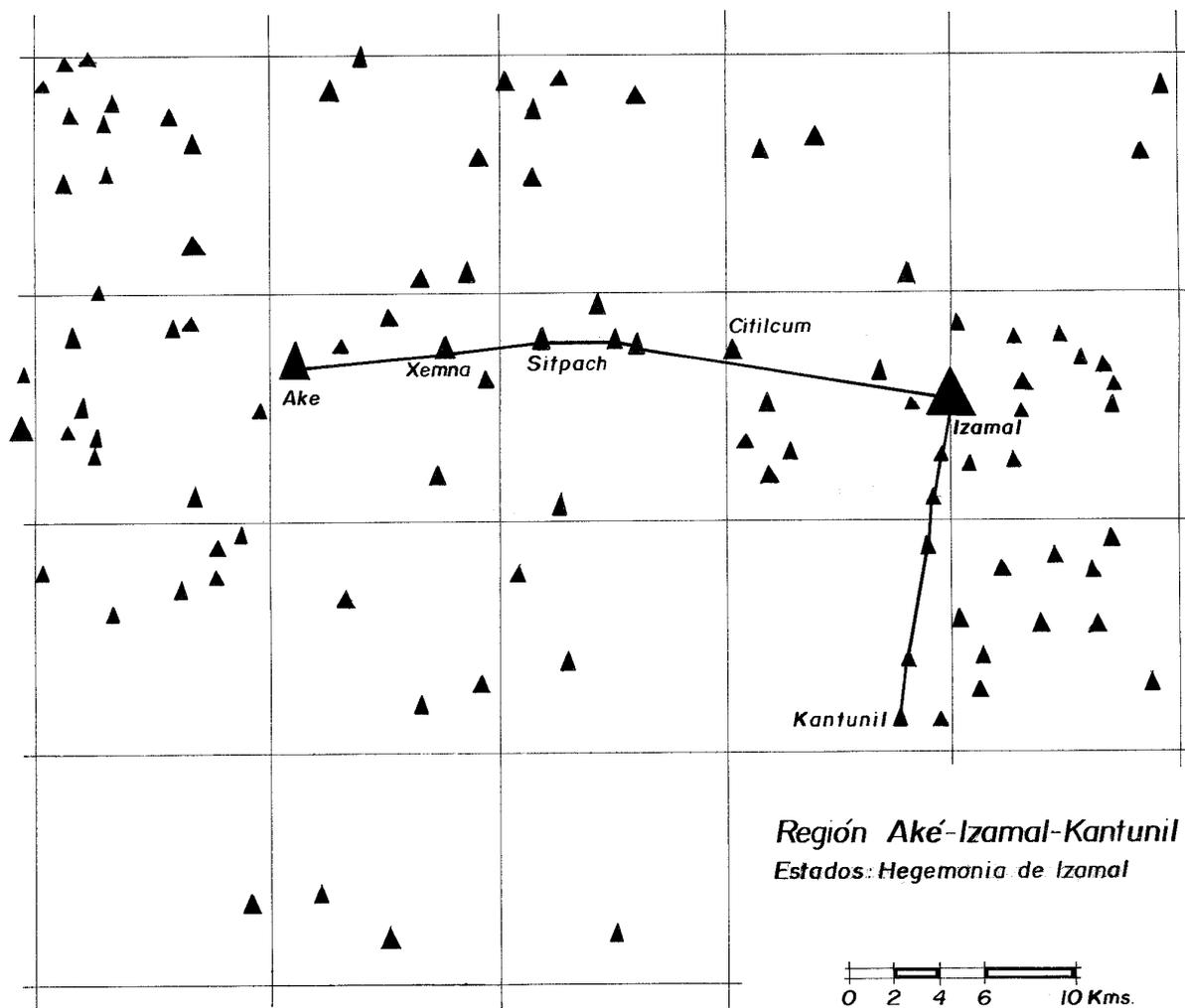
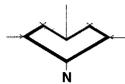
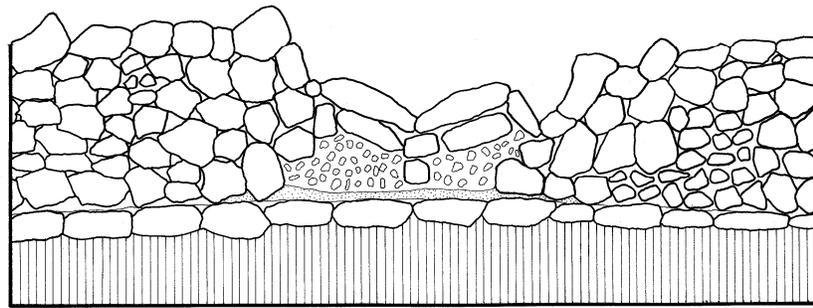
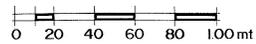


Figure 5. *Zac beob* between *Itzmal* and *Ake* and *Itzmal* and *Kantunil*.
 (Redrawn from Maldonado Cárdenas 1995 and 1997).



CORTE TRANSVERSAL DEL CANAL
Y SACBE DE I(T)B



Dibujó: Rosario Domínguez

Figure 6. Bridge crossing a canal between two aguadas in *Calak Muul*, Campeche (Redrawn from Domínguez 1991-1992).

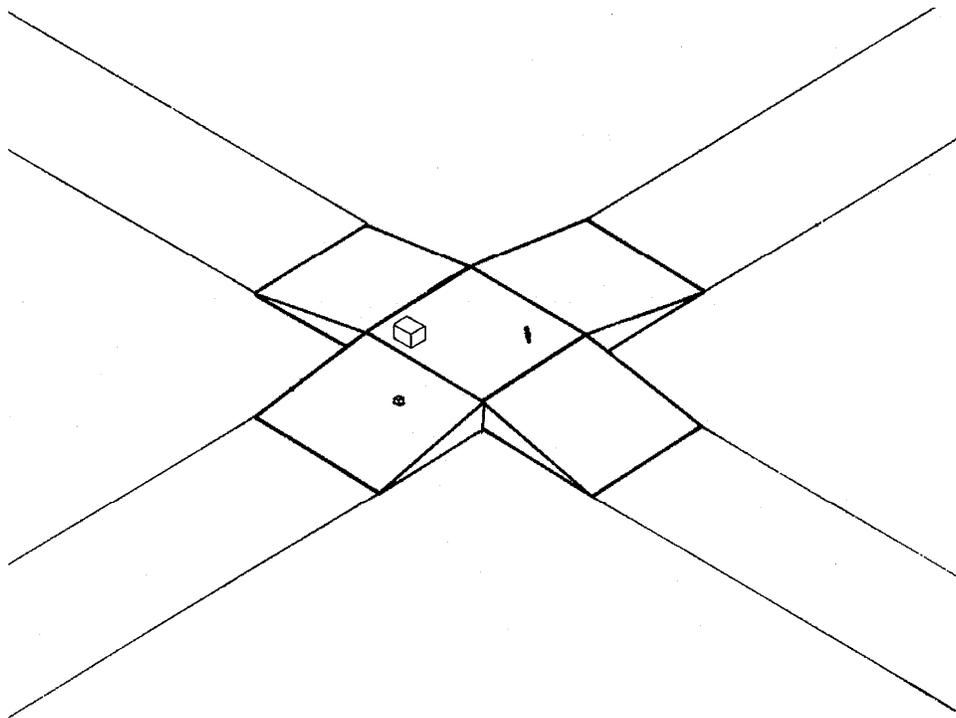


Figure 7. Location of the crossroads formed by *Zac Beob* 1 and 3 in *Coba*, Quintana Roo including a small shrine and stela fragment. No scale. (Redrawn from Folan et al. 1983).

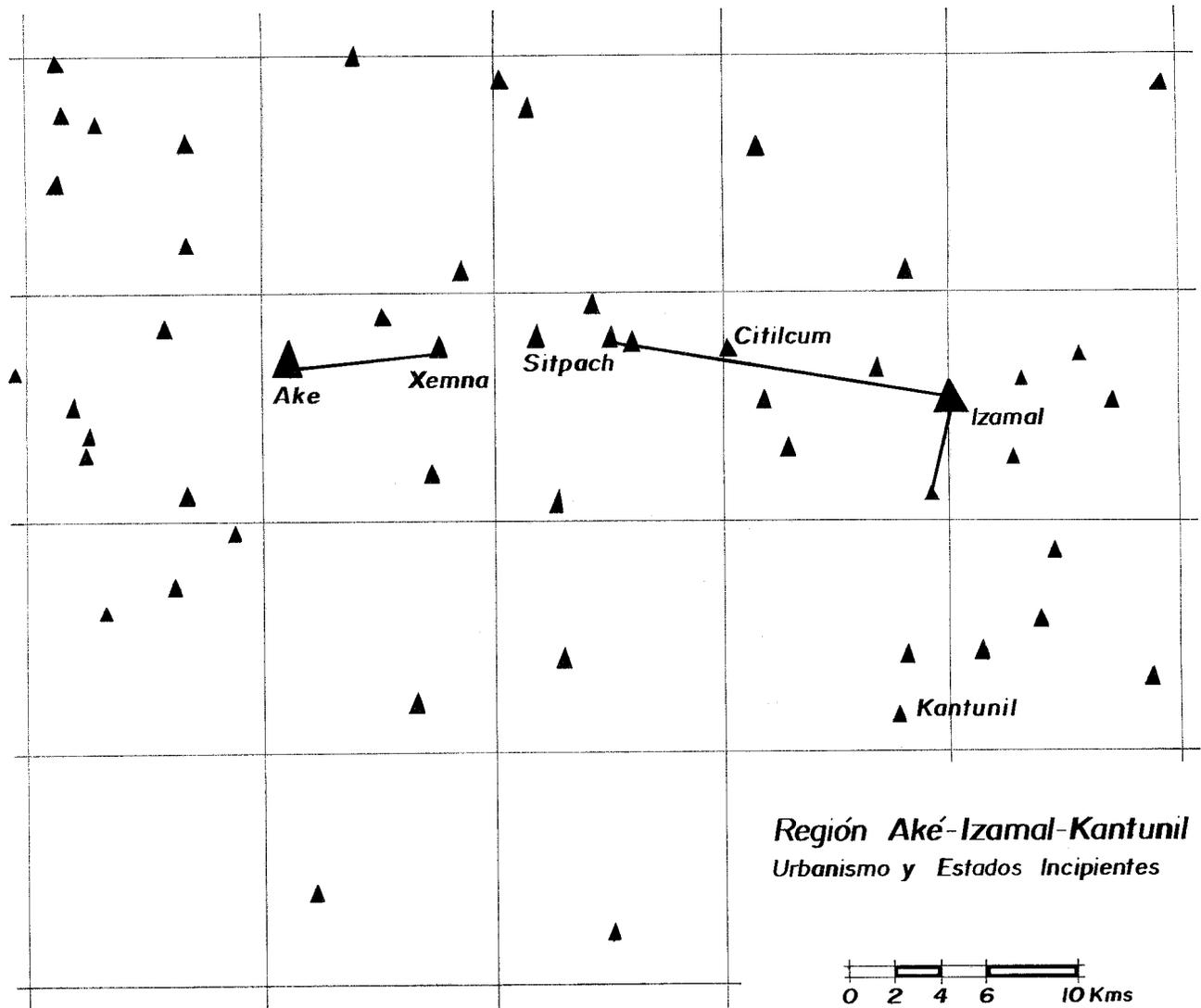


Figure 8. The *zac be* between *Ake* and *Itzmal* with a section missing between *Zic Pach* and *X-Em Na*. Also missing is the final section of the *zac be* from *Itzmal* and *Kantunil*. (See figure 5.) (Redrawn from Maldonado Cárdenas 1995).

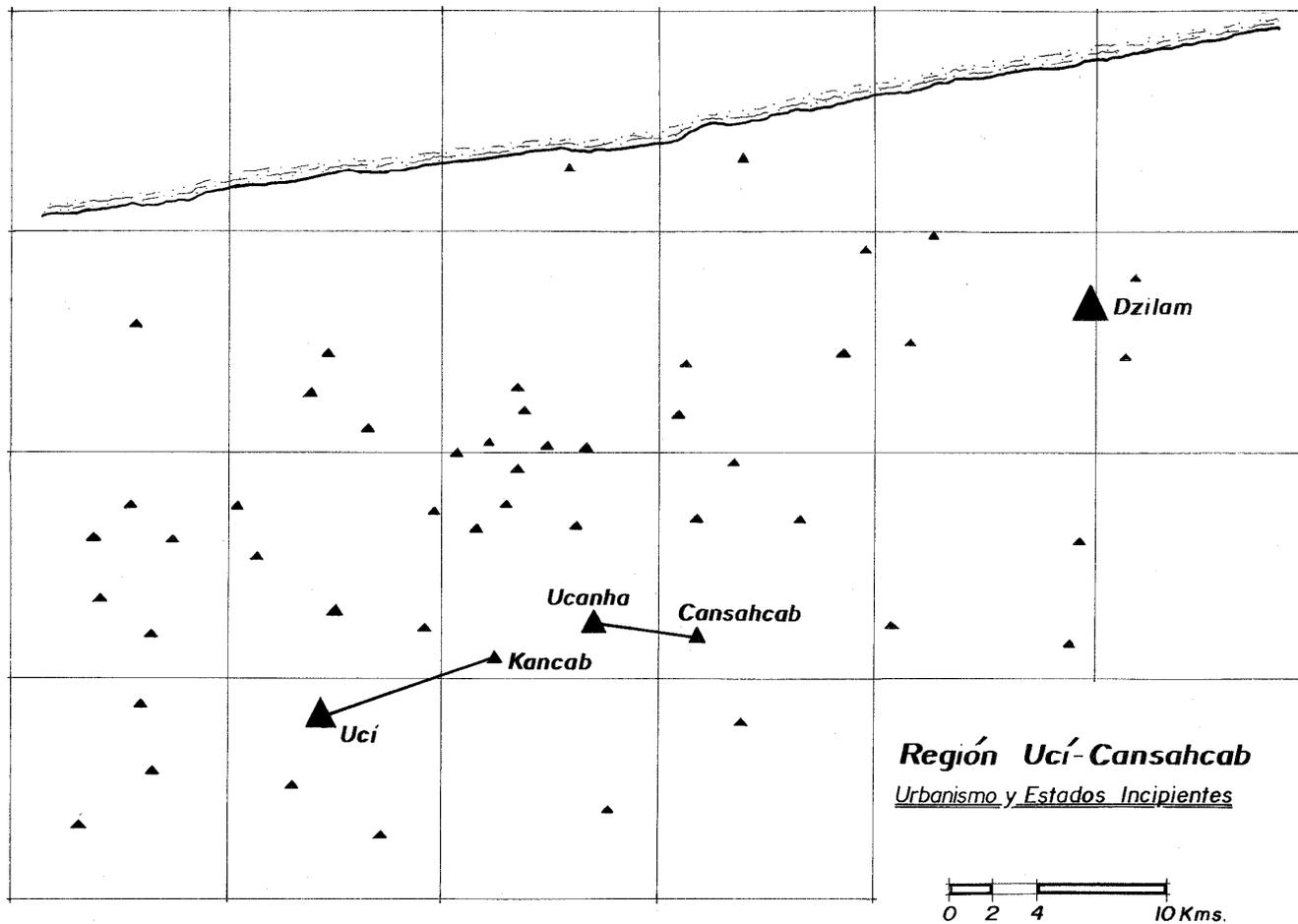


Figure 9. *Zac be* between Uci and Zahcab missing the section between Kancab and Ucan Ha. (Redrawn from Maldonado Cárdenas 1995).

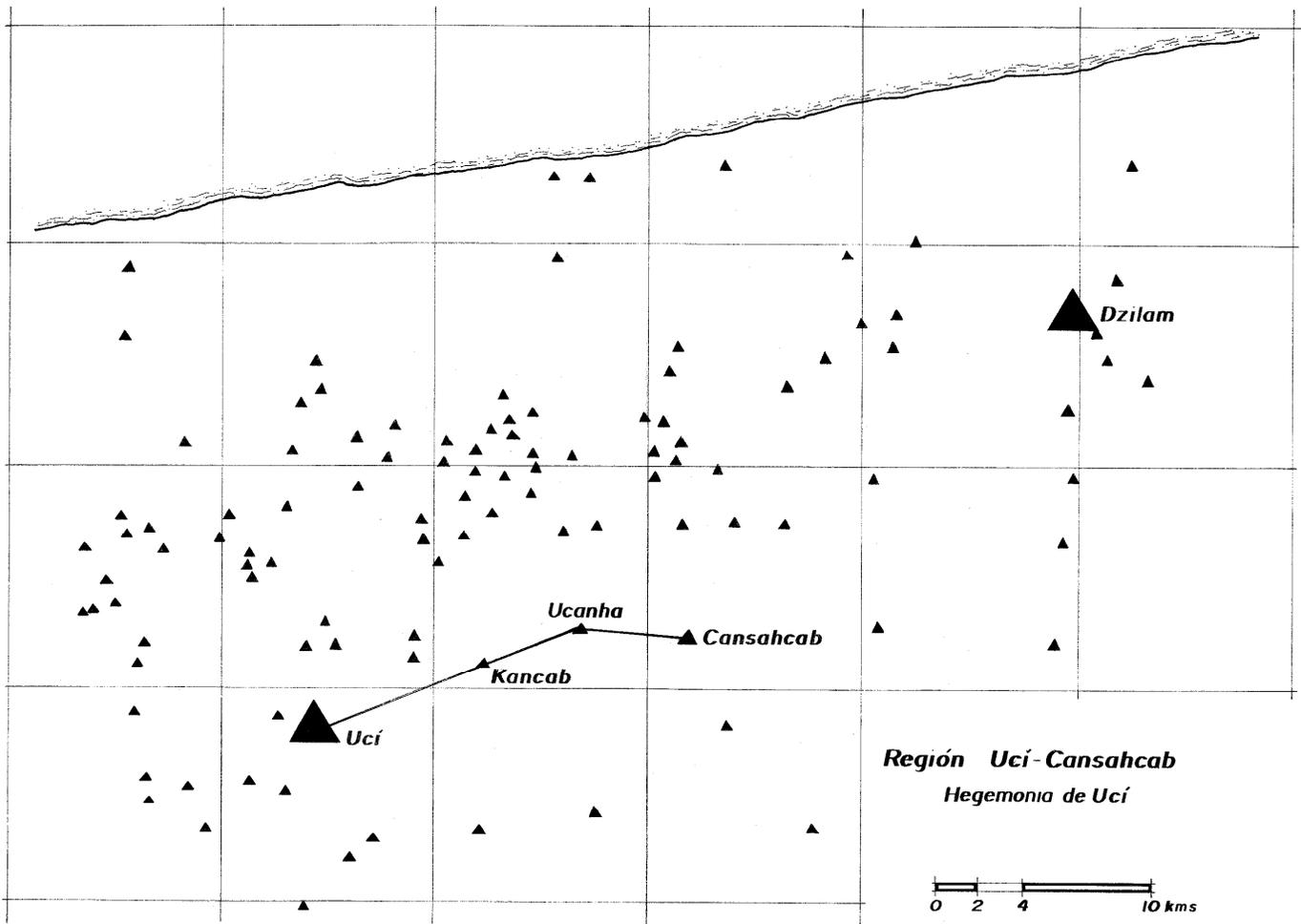


Figure 10. *Zac be* between Uci and Kan Zahcab with the section between Kancab and Ucan Ha completed. (Redrawn from Maldonado Cárdenas 1995).

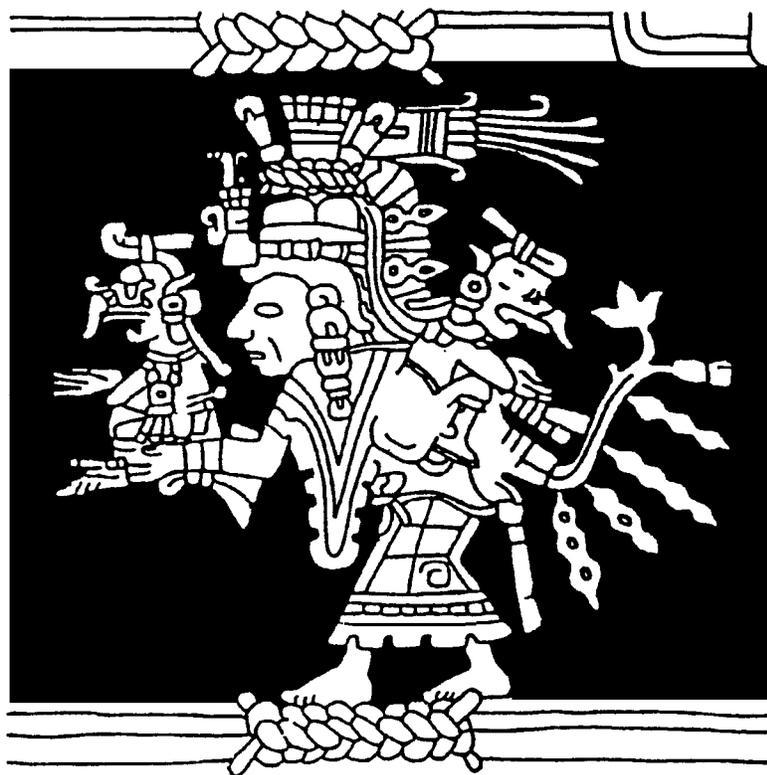


Figure 11. The Goddess *Ix Chel* in *Tulum*, Quintana Roo carrying two small images of *Chac*. (Redrawn from Sabloff and Rathje 1975).