

University of Central Florida

STARS

Electronic Theses and Dissertations

2011

New Perspectives On The Quatrefoil In Classic Maya Iconography The Center And The Portal

Rachel K. Egan

University of Central Florida



Part of the [Anthropology Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

This Masters Thesis (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of STARS. For more information, please contact STARS@ucf.edu.

STARS Citation

Egan, Rachel K., "New Perspectives On The Quatrefoil In Classic Maya Iconography The Center And The Portal" (2011). *Electronic Theses and Dissertations*. 1845.

<https://stars.library.ucf.edu/etd/1845>

NEW PERSPECTIVES ON THE QUATREFOIL IN CLASSIC
MAYA ICONOGRAPHY:
THE CENTER AND THE PORTAL

by

RACHEL K. EGAN
B.A. University of Colorado, Boulder 2008

A thesis submitted in partial fulfillment of the requirements
for the degree of Master of Arts
in the Department of Anthropology
in the College of Sciences
at the University of Central Florida
Orlando, Florida

Fall Term
2011

ABSTRACT

The quatrefoil is a pan-Mesoamerican symbol with considerable time-depth. For the Maya, use of the symbol peaked during the Classic Period, reaching its highest frequency and largest geographical spread. Consequently, understanding its meaning has the potential to illuminate information about Precolumbian Maya worldview. While there have been several studies that focus on Preclassic Period quatrefoils, a similar study is lacking for Classic Period. Furthermore, the evaluations of the quatrefoil that do exist for the Classic Period are limited, often focusing on a select few examples. This thesis attempts to rectify the gap in extant research through an examination of the quatrefoil motif utilized by the Classic Period Maya. Specifically, the goal of the thesis was to determine whether the current interpretation of the quatrefoil as a cave is and also to investigate how the symbol communicated broader ideas about worldview and ideology. The approach that was utilized focuses on both archaeological and iconographic contexts. As an iconographic symbol, I attempt to understand the quatrefoil through the use of semiotics with particular emphasis on contextualization and analogy. The results of this study suggest that, while there were some patterns related to spatial distribution, the meaning of the quatrefoil motif was dependent on context and had considerable variations. I conclude that the analysis of the symbol, when based on specific usages and contexts, reveals that there is not enough evidence to support the current interpretation of quatrefoil as cave. Rather, the quatrefoil can be more accurately interpreted as a cosmogram that delineated information about how the Maya conceptualized, ordered, and

accessed space that was appropriated by elites to reinforce and even legitimize political authority.

ACKNOWLEDGMENTS

This thesis would not have been possible without the support and advice of my committee members, Dr. Arlen Chase, Dr. Stacy Barber, and Dr. Diane Chase. I would like to thank my advisor Dr. Arlen Chase for consistently encouraging me to explore new ideas and for stimulating my drive to succeed in the field of Maya archaeology. I am truly indebted and thankful to my advisor Dr. Stacy Barber whose critiques and red ink drove me to be a better writer, researcher, and student. Furthermore, she has been an inspiration and mentor to me during my time at the University of Central Florida for which I am eternally grateful. I would also like to thank Dr. Diane Chase for her contributions and guidance.

I would like to show my gratitude to Dr. Payson Sheets whose mentoring during my undergraduate degree first inspired me to pursue archaeology and whose continual support and advice has provided me with confidence. I owe sincere and earnest thanks to my mom for her endless and often repeated editing without which my thesis would have been unreadable. I am also obliged to many of my fellow students who supported me throughout the writing process, particularly Jeff Brzezinski. Finally, I would like to thank Patrick Carroll who whole-heartedly encouraged me even when I was overcome with stress.

TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGMENTS	iv
TABLE OF CONTENTS.....	v
LIST OF FIGURES	vii
LIST OF TABLES	ix
CHAPTER 1: INTRODUCTION.....	1
1.1 Defining the Quatrefoil	1
CHAPTER 2: BACKGROUND AND PROBLEM STATEMENT.....	4
2.1 Introduction.....	4
2.2 Quatrefoils and Cosmology.....	4
2.2.1 The Maya Universe.....	5
2.2.2 The Center	6
2.2.3 Transition and Liminality	7
2.3 Origins of the Quatrefoil Motif.....	9
2.4 Previous Scholarship.....	17
2.4.1 Of Quatrefoils and Caves Part I.....	18
2.4.2 Literature on the Quatrefoil	20
2.5 Problem Statement	22
2.6 Summary	25
CHAPTER 3: THEORITICAL BACKGROUND AND METHODOLOGY	26
3.1 Introduction.....	26
3.2 Images and Meaning	26
3.2.1 Semiotics.....	27
3.2.2. Ideology and Power	29
3.3 Methodology	31
3.3.1 Analogy and Contextualization	34
3.4 Summary	35
CHAPTER 4: DATA PRESENTATION AND ANALYSIS	37
4.1 Characteristics of the Quatrefoil	40
4.1.1 Form.....	40
4.1.2 Function	42
4.1.3 Monument Type.....	42
4.1.4 Venue.....	43
4.2 General Associations.....	45
4.2.1 The Iconography of the Surrounding Context	46
4.2.2 The Iconography of the Quatrefoil	50
4.2 SPATIAL AND TEMPORAL DISTRIBUTIONS	65
4.2.1 Temporal Distributions	66
4.2.2 Spatial Distributions	73
4.3 The Preclassic Period	78

4.4 Summary	79
CHAPTER 5: ICONOGRAPHIC INTERPRETATIONS	80
5.1 Introduction	80
5.2 The Quatrefoil Cosmogram	80
5.2.1 The Horizontal Quadrants of the Earth	81
5.2.1 Portals and Transition	84
5.3 Royal Power	88
5.3.1 The Figures	89
5.3.2 Ritual	91
5.3.3 Transformation	97
5.4 Summary	98
CHAPTER 6: DISCUSSION AND CONCLUSIONS	99
6.1 Introduction	99
6.2 Of Quatrefoils and Caves Part II	99
6.2.1 Earth and Caves Contexts	100
6.2.2 Caves, Portals, and Transition	103
6.2.3 Redefining Caves	104
6.3 Summary	105
6.3.1 Distributions	106
6.3.2 Configuring the Quatrefoil as an Ideological Symbol	107
6.3.3 A Pan-Mesoamerican Symbol	108
6.4 Future Research	109
6.5 Conclusion	110
APPENDIX A: ADDITIONAL QUARTREFOILS	112
APPENDIX B: CLASSIC PERIOD QUATREFOILS	114
APPENDIX C: IMAGE PERMISSION I	185
APPENDIX D: IMAGE PERMISSION II	187
APPENDIX E: IMAGE PERMISSION III	190
APPENDIX F: IMAGE PERMISSION IV	192
APPENDIX G: IMAGE PERMISSION V	194
APPENDIX H: IMAGE PERMISSION VI	196
APPENDIX I: IMAGE PERMISSION VII	198
APPENDIX J: IMAGE PERMISSION VIII	201
APPENDIX K: IMAGE PERMISSION IX	203
APPENDIX L: IMAGE PERMISSION X	205
APPENDIX L: IMAGE PERMISSION XI	207
APPENDIX M: IMAGE PERMISSION XII	209
LIST OF REFERENCES	190

LIST OF FIGURES

FIGURE 1	QUATREFOIL FORMS.....	3
FIGURE 2	MONUMENT 3, LA BLANCA.....	10
FIGURE 3	ALTAR, AUGUACATAL.....	11
FIGURE 4	MONUMENT 1 (LEFT), CHALCATZINGO.....	13
FIGURE 5	MONUMENT 9 (RIGHT), CHALCATZINGO.....	13
FIGURE 6	STELA 8 (LEFT), IZAPA.....	15
FIGURE 7	STELA 27 (RIGHT), IZAPA.....	15
FIGURE 8	ALTAR 48, ABAJ TAKALIK.....	16
FIGURE 10	MAP OF SITES WITH QUATREFOILS.....	38
FIGURE 11	STACKED BAR COLUMN SHOWING FREQUENCIES OF QUATREFOIL FORMS.....	41
FIGURE 12	PIE CHART SHOWING FREQUENCIES OF DIFFERENT FUNCTIONS.....	42
FIGURE 13	PIE CHART SHOWING FREQUENCIES OF DIFFERENT MONUMENT TYPES.....	43
FIGURE 14	PIE CHART SHOWING FREQUENCIES OF DIFFERENT VENUES.....	44
FIGURE 15	BAR GRAPH SHOWING THE ICONOGRAPHIC ASSOCIATIONS OF THE SURROUNDING CONTEXT.....	47
FIGURE 16	BAR GRAPH SHOWING THE MAJOR ICONOGRAPHIC THEMES ASSOCIATED WITH QUATREFOIL FRAMES.....	51
FIGURE 17	MAP SHOWING A 30-MILE BUFFER AROUND SITES WITH PERSONAL ADORNMENT QUATREFOILS.....	64
FIGURE 18	PIE CHART SHOWING THE TEMPORAL DISTRIBUTION.....	66
FIGURE 19	MAP OF EARLY CLASSIC PERIOD SITES WITH QUATREFOILS.....	67
FIGURE 20	MAP OF LATE CLASSIC PERIOD SITES WITH QUATREFOILS.....	69
FIGURE 21	MAP OF TERMINAL CLASSIC SITES WITH QUATREFOILS.....	72
FIGURE 22	MAP OF MAYA SITES WITH A 25-MILE BUFFER.....	74
FIGURE 23	THE MOTMOT MARKER, COPAN.....	115
FIGURE 24	STELA 7, MACHAQUILA.....	116
FIGURE 25	ALTAR 13, CARACOL.....	117
FIGURE 26	STELA 2, BONAMPAK.....	118
FIGURE 27	STELA 35, PIEDRAS NEGRAS.....	119
FIGURE 28	STELA 1, PIEDRAS NEGRAS.....	120
FIGURE 29	STELA 3, PIEDRAS NEGRAS.....	121
FIGURE 30	STELA 8, PIEDRAS NEGRAS.....	122
FIGURE 31	STELA 11, PIEDRAS NEGRAS.....	123
FIGURE 32	STELA 24, NARANJO.....	124
FIGURE 33	STELA 29, NARANJO.....	125
FIGURE 34	STELA 21, NARANJO.....	126
FIGURE 35	STELA 40, NARANJO.....	127
FIGURE 36	STELA 6, NARANJO.....	128
FIGURE 37	STELA 13, NARANJO.....	129
FIGURE 38	STUCCO FIGURE 2, PALENQUE.....	130
FIGURE 39	TABLET OF THE SLAVES, PALENQUE.....	131
FIGURE 40	CREATION STONE, PALENQUE.....	132
FIGURE 41	LINTEL 24, YAXCHILAN.....	133
FIGURE 42	LINTEL 25, YAXCHILAN.....	134
FIGURE 43	LINTEL 46, YAXCHILAN.....	135
FIGURE 44	STELA 11, YAXCHILAN.....	136
FIGURE 45	LINTEL 9, YAXCHILAN.....	137
FIGURE 46	LINTEL 33, YAXCHILAN.....	138
FIGURE 47	LINTEL 50, YAXCHILAN.....	139
FIGURE 48	LINTEL 14, YAXCHILAN.....	140
FIGURE 49	STELA 24, XULTUN.....	141
FIGURE 50	STRUCTURE 5C-4 LINTEL 2, TIKAL.....	142

FIGURE 51	STELA 4, CARACOL.....	143
FIGURE 52	STELA 6, CARACOL.....	144
FIGURE 53	SCULPTURE 131, COPAN	145
FIGURE 54	ALTAR 4, TIKAL.....	146
FIGURE 55	ALTAR, EL PERU.....	147
FIGURE 56	ALTAR W', COPAN	148
FIGURE 57:	STELA 10, MACHAQUILA	149
FIGURE 58	THE NORTH EAST JAMB, TEMPLE 18 JAMB, COPAN.....	150
FIGURE 59	THE NORTH WEST JAMB, TEMPLE 18, COPAN.....	151
FIGURE 60	THE SOUTH EAST JAMB, TEMPLE 18, COPAN	152
FIGURE 61	THE SOUTH WEST JAMB, TEMPLE 18 COPAN.....	153
FIGURE 62	ALTAR 1, CARACOL.....	154
FIGURE 63	ALTAR 3, CARACOL.....	155
FIGURE 64	ALTAR 4, CARACOL.....	156
FIGURE 65	ALTAR 6, CARACOL.....	157
FIGURE 66	ALTAR 7, CARACOL.....	158
FIGURE 67	ALTAR 11, CARACOL	159
FIGURE 68	ALTAR 14, CARACOL	160
FIGURE 69	ALTAR 15, CARACOL	161
FIGURE 70	ALTAR 19, CARACOL	162
FIGURE 71	ALTAR 1, NARANJO.....	163
FIGURE 72	PANEL 3, CANCUEN.....	164
FIGURE 73	ALTAR 10, TIKAL	165
FIGURE 74	THE NORTH BALL COURT MARKER, BALL COURT MARKER, COPAN	166
FIGURE 75	THE CENTER BALL COURT MARKER, BALL COURT MARKER, COPAN	167
FIGURE 76	THE SOUTH BALL COURT MARKER, BALL COURT MARKER, COPAN	168
FIGURE 77	STELA 4, MACHAQUILA	169
FIGURE 78	STELA 8, MACHAQUILA	170
FIGURE 79	TEMPLE OF THE CROSS EAST SANCTUARY ROOF, PALENQUE	171
FIGURE 80	TEMPLE OF THE CROSS WEST SANCTUARY ROOF, PALENQUE.....	172
FIGURE 81	ALTAR R, QUIRIGUA.....	173
FIGURE 82	ALTAR Q, QUIRIGUA	174
FIGURE 83	STELA 2, TRES ISLAS	175
FIGURE 84	SOUTH JAMB, TEMPLE OF THE FOLIATED CROSS, PALENQUE	176
FIGURE 85	WEST JAMB, TEMPLE OF THE CROSS JAMB, PALENQUE	177
FIGURE 86	STELA 1, BONAMPAK.....	178
FIGURE 87	PACAL SARCOPHAGUS COVER, PALENQUE.....	179
FIGURE 88	STELA 40, PIEDRAS NEGRAS.....	180
FIGURE 89	MONUMENT 23, QUIRIGUA	181
FIGURE 90	PIER A, TEMPLE OF THE SUN, PALENQUE.....	182
FIGURE 91	MONUMENT 135.....	183
FIGURE 92	THE PECCARY SKULL, COPAN	184

LIST OF TABLES

TABLE 1	THE DATABASE	39
TABLE 2	CHI SQUARE ANALYSIS OF DIFFERENT QUATREFOIL FORMS	41
TABLE 3	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS FOR FRAME QUATREFOILS.....	52
TABLE 4	TABLE SHOWING THE NUMBER OF FIGURES IN QUATREFOILS	53
TABLE 5	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS FOR PERSONAL ADORNMENT QUATREFOILS.....	54
TABLE 6	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS FOR ELEMENT QUATREFOILS	65
TABLE 7	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS BETWEEN THE EARLY CLASSIC AND CLASSIC PERIODS	68
TABLE 8	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS BETWEEN THE LATE CLASSIC AND CLASSIC PERIODS	70
TABLE 9	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS BETWEEN THE TERMINAL CLASSIC AND CLASSIC PERIODS.....	71
TABLE 10	TABLE SHOWING THE GENERAL GEOGRAPHIC DISTRIBUTION FREQUENCIES	77
TABLE 11	TABLE SHOWING THE PERCENTAGE CHANGE IN ICONOGRAPHIC ASSOCIATIONS BETWEEN THE PRECLASSIC AND CLASSIC PERIODS	79

CHAPTER 1: INTRODUCTION

The quatrefoil was a prominent pan-Mesoamerican symbol consistently used from the Preclassic Period (900 B.C.-A.D. 250) to the Postclassic Period (A.D. 900-1541/1697). For the Maya, the symbol reached its peak prominence and diversity during the Classic Period, A.D. 250-900. Current interpretations of how the quatrefoil was utilized by the Maya are based on the idea that its function was consistent through time. Therefore, the interpretation of Preclassic quatrefoils as symbolic cave portals to the underworld should be applicable to the Classic Maya. However, this assumption has yet to be subjected to a focused study. The research presented in this thesis directly addresses the interpretation of the quatrefoil as a cave portal through an examination of this motif in Maya art during the Classic Period. The goal of this thesis is to understand, through the evaluation of archaeological and iconographic contexts as well as through formal depictions, how the symbol was appropriated by the Classic Period Maya and for what purpose. Specifically, this thesis addresses several research questions. First, did the iconography of the quatrefoil indicate that it was a cave? Second, what were other possible meanings of the symbol? Third, how did the quatrefoil function to communicate ideas about worldview and ideology?

1.1 Defining the Quatrefoil

In this thesis I hope to contribute to the existing scholarship on quatrefoils, specifically adding to the works by Guernsey (2010), Fash (2005, 2009), Stross (1996), Stone (1995), and Gillespie (1993). To explore the symbol in Classic Maya iconography however, one issue must first be addressed: how is the symbol defined and is the utilized definition succinct? Until very

recently, the motif was designated not only as a quatrefoil in scholarship but also as a “quadrilobal” or “cruciform medallion” (Baudez 1994), a “short armed cross” (Stross 1996), and a cleft (Taylor 1978), along with numerous other terminologies that expounded on its inherent four-part form. In consequence, the terminology often failed to acknowledge the significant diversity represented by the symbol. For example, the terms “lobe” and “medallion” imply a rounded shape. Guernsey (2010:75, 82) defines the quatrefoil as a “four-lobed flower shape,” while simultaneously stating that the variety of forms—from curvilinear to rectilinear and complete to partial—while distinct expressions, were nonetheless considered permutations of the same symbol. As a result, a new explicit definition of the quatrefoil is necessary in order to be able define its use in iconography. To avoid charged terminology, the quatrefoil can fundamentally be defined as a four-part or quadripartite symbol. In addition, following Guernsey (2010), quatrefoils in Maya iconography can also include halved partial forms of the symbol. Here, it is necessary to note that the tripartite symbol can be considered distinct from the quatrefoil. I rely on context to distinguish between the two. Furthermore, it is my assertion that for a partial quatrefoil to be considered representative of the same sign and not a tripartite symbol, the shape must be that of a halved quatrefoil. The quatrefoil can be more accurately defined as a four-part symbol, including all types of curvature and completeness, which generally sides of equal lengths (Figure 1).

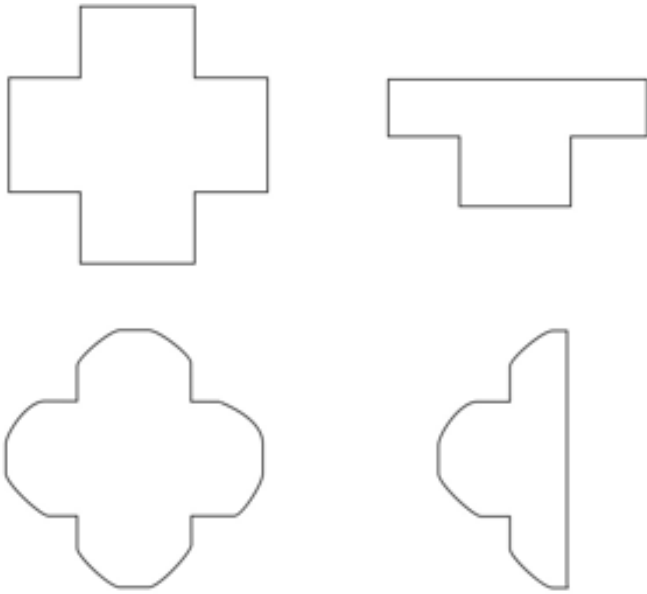


Figure 1 Quatrefoil Forms

Top left: complete and rectilinear. Top right: partial and rectilinear. Bottom left: complete and curvilinear. Bottom right: partial and curvilinear.

CHAPTER 2: BACKGROUND AND PROBLEM STATEMENT

2.1 Introduction

This chapter provides an overview of the background information relevant for exploring the use of the quatrefoil in Classic Period Maya iconography. Specifically, in order to understand the quatrefoils role in Maya worldview, this chapter will address how the Maya conceived of space. Next, this chapter will provide a review the origins of the quatrefoil motif, with a focus on Preclassic Period quatrefoils throughout Mesoamerica and an examination of the previous scholarship, with particular emphasis on how it has influenced current understandings. Finally, an assessment of the specific conundrums associated with quatrefoil delineates the problems that need to be addressed regarding the symbols current interpretation.

2.2 Quatrefoils and Cosmology

As currently understood, the quatrefoil was a symbolic cave thereby designating that it was a cosmic symbol that could function as a liminal portal providing access between existential worlds. The symbol therefore becomes a cosmological symbol that delineated information about the ordering of the world. Consequently, understanding how the Maya constructed their worldview is necessary for understanding the symbols importance. This section reviews the implications of current interpretations related to the analysis of the structure and contexts associated with the quatrefoil.

2.2.1 The Maya Universe

For the Maya, the universe was conceived in two fundamental ways: first, it was vertically layered with three planes of existence; and second, it was horizontally quadripartite with four cardinal directions centered on a pivotal axis (Mathews and Garber 2004; Schele, et al. 1998). The three vertical planes of existence could be separated into two dimensions, the physical world and the otherworld. The otherworld was divided into a celestial realm and a watery underworld, which together were the realm of the deities, ancestors, and other metaphysical beings (Chase and Chase 2009; Guernsey 2010; Schele and Freidel 1992:65). The physical world was the surface of the earth and the realm inhabited by humans. The earth was conceived of as floating in a body of water and was considered both sacred and animate. Commonly the earth was depicted in iconography as the back of a saurian creature identified as either a turtle or crocodile (Bassie-Sweet 1991:172; Schele and Freidel 1990; Taube 1988; Thompson 1934:10).

The horizontal partitioning of the universe was segmented into four “cardinal directions,” originally identified by Seler (1901-1902) Thompson (Thompson 1934), which functioned to orient the earth (Coggins 1980:728). However, it has been suggested that the directions orient according to the daily movement of the sun across the sky and were not aligned with western concepts of directionality (Gillespie 1993:71; Schele and Freidel 1992). If that is the case then the four directions, therefore, incorporate both horizontal and vertical partitioning (Coggins 1980:730). Each of the four cardinal directions was associated with “particular deities, colors, birds, trees, and other symbolic elements” (Smith 2005:217; Thompson 1934). Furthermore,

mythology describes four Bacabaes, each located at one of the four directions, that held up the sky/earth on their shoulders, thereby separating the human world from the upper world.

2.2.2 The Center

The concept of center was one of the most powerful transitional elements of the Maya cosmos for it represented the location where the three worlds and four cardinal directions met (Gillespie 1993:72). The center was a place of opposites where “time and space were essentially unsegmented and unordered” (Gillespie 1993:71). This was possible because the Maya conceived of time as cyclical, where both the future and the past were linked together in the otherworld realm. As a consequence, the otherworld was able to hold deities and ancestors simultaneously. Furthermore, despite the universe being divisionally conceived, the Maya still regarded the universe as unified, making no distinction between the “natural and supernatural realms” (Sharer 2006:93). Rather, these two realms were intertwined with the “action and interactions of Otherworld beings influence[ing] the fate of this world [..and where the] denizens of the otherworld were also dependent on the deeds of the living” (Schele and Freidel 1992:65). The concept of an above, middle, and underworld that are simultaneously separated and conjoined within a constant cycle of birth, death, and rebirth, forming the source of “cosmic order” (Chase and Chase 2009:230; Gillespie 1993:732). The center was therefore an access point between worlds and time and was not limited to any one location (Gillespie 1993:72). Further, as the connector between world-levels, it functioned as a portal providing access to the otherworld.

Visually, the concept of center was often depicted in art and architecture as a cosmogram, defined as “a representation of the entire universe through symbolic shorthand or artistic

metaphor” (Smith 2005:217). Cosmograms can be seen in many aspects of Maya life, from features of the natural or created landscape to depictions on artistic media. The sacred mountain is a pertinent example of a cosmogram because it could be real (i.e. a mountain), created (i.e. a mountain-temple), or depicted artistically. The sacred mountain functioned as a cosmogram by connecting all three-world levels while simultaneously co-existing in all three at once. The world tree, depicted as having with roots extending into the underworld, the trunk in the earthly world, and branches protruding into the upper world, was another common artistic metaphor of the cosmic center that functioned as a cosmogram (Freidel, et al. 2008:7; Reilly III 1991; Wilson-Mosley, et al. 2010:25).

2.2.3 Transition and Liminality

Access between worlds was not limited to the center and was possible through geographic features, natural elements, “transformational or mediating elements,” that could be materialized through ritual (Gillespie 1993:72; Schele and Freidel 1992:67). Transition between world levels in Maya worldview was possible through portals or sacrifice (Chase and Chase 2009:225). Portals, as locales where worlds joined, could simultaneously exist in all three layers at once. This transitional ability imbued portals with liminality, originally defined by Van Gennep (1960) as a stage in a rite of passage where the individual occupies a transitional state between the changes from one role to the next. For the Maya, liminality has been further defined by Chase and Chase (2009:221-229) as “a stage in rites of passage” as well as “a transcendent state of being” that while “inclusive of thresholds, entrances and portals, specifically focuses on the transition of humans with regard to important life events.”

Portals have a vast array of depictions and can be real or unreal, natural or created, symbolic or manifested (Benson 1985; Brady and Ashmore 1999; Chase and Chase 2009; Schavelzon 1980). They are often signified by the presence of mouths or jaws, caves, cauauc monsters, serpents, and/or sea creatures (Brady 1999; Chase and Chase 2009). Caves were one of the most important portals in Maya worldview, which were portals to the underworld (Gillespie 1993). It has been generally accepted that the quatrefoil served as an iconographic representation of a cave. Therefore, a quatrefoil by transitive properties was a cave and a portal and, by extension, quatrefoils were important symbols in Maya iconography.

Portals were imbued with power. Otherworld inhabitants could exist in and travel between the three planes of existence. However, worldly humans during their natural life were “generally restricted to the surface of the earth” (Wilson-Mosley, et al. 2010:25). The “divine,” such as rulers and otherworld inhabitants, were not confined to one plane of existence and could access other world levels (Wilson-Mosley, et al. 2010:25). This limited ability to enter a transitional state imbued ruler(s) with extramundane power, including the ability to contact otherworld beings and ancestors, thereby reinforcing and legitimizing their rule (Chase and Chase 2009:231). The cosmos was a very important aspect of Maya worldview because “it [was] the cosmic power upon which the rulers drew, and [furthermore] society and the cosmos were seen as parallel in structure and operation” (Gillespie 1993:71).

The current understanding of the quatrefoil as a cave places it as an important cosmological motif that by extension functioned as a symbolic portal between worlds. I propose that the quatrefoil can be seen as more than a cosmological symbol because of its connection with caves. The four-part shape of the quatrefoil (denoted by its name) inherently ties it to the

concept of a quadripartite division of the universe. It may then follow that the center of the quatrefoil is representative of the cosmic center (Smith 2005:217). The following chapters aim to explore this proposal by methodologically evaluating the Maya use of the quatrefoil diachronically and spatially during the Classic Period.

2.3 Origins of the Quatrefoil Motif

The quatrefoil was consistently used from the Preclassic into the Postclassic Periods, originating as an Olmec iconographic motif that later spread throughout Mesoamerica (Grove 2000; Guernsey 2010; Stross 1996). The motif's deep pan-Mesoamerican history suggests that the cosmological concepts associated with it also have a long a deep tradition. While the earliest quatrefoils come from outside the Maya region, there are inextricable similarities to the Maya quatrefoils, especially visible in the Preclassic Period. Furthermore, the writing about these early non-Maya quatrefoils has significantly influenced later interpretations of Maya quatrefoils. This section examines Preclassic Period quatrefoils in order to illuminate the origins of the motif and its subsequent interpretations.

The quatrefoil first coalesced into an important symbol during the Late Preclassic Period (Guernsey 2010). The earliest quatrefoil dates to the Middle Preclassic where it is found on Monument 3 from the Olmec site of La Blanca (**Error! Reference source not found.**) (Guernsey 2010:76). The Olmec occupied the geographical area of the Southern Gulf Coast region of Mexico (Reilly III 1991:151). Monument 3 from La Blanca, dating to 900-800 B.C., is an earth and clay sculpture 2.1 meters in diameter colored black and red (Love and Guernsey 2007). The sculpture takes the shape of a curvilinear quatrefoil with a central concave basin, probably meant to contain liquid (Guernsey 2010:76; Love and Guernsey 2007).



Figure 2 Monument 3, La Blanca

Image permission and photograph by Dr. Michael W. Love, California State University, Northridge.

This monument is very similar to an altar dating to Late Preclassic/Early Classic transition from Aguacatal, Campeche, Mexico (**Error! Reference source not found.**) (Love and Guernsey 2006). Like Monument 3, the altar had a slightly concave central basin curvilinear in form, and I suggest it also could have contained liquid. This stuccoed altar was decorated with various water motifs and glyphs (Guernsey 2010; Houston, et al. 2005). These quatrefoils establish an early connection between quatrefoils and water, a theme further developed during the Late Preclassic and Classic Periods.

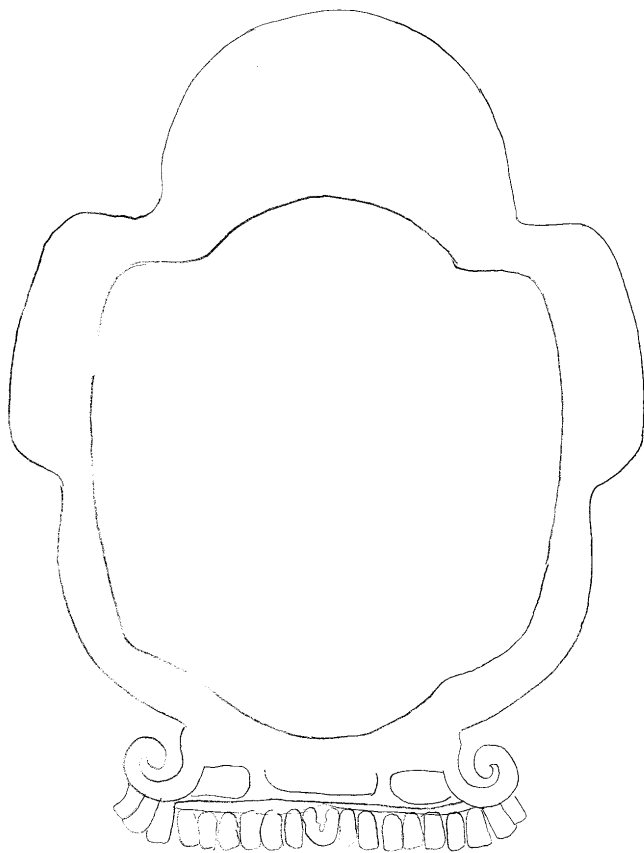


Figure 3 Altar, Auguacatal

Drawing by author. Detail from *The Pool of the Rain God: an Early Stuccoed Altar at Auguacatal, Campeche, Mexico* (2005).

Perhaps the two best-known early representations of quatrefoils are from Chalcatzingo, located in the highlands of Central Mexico. Chalcatzingo's monuments were constructed around 700-500 B.C. making them contemporaneous with the Olmec site of La Venta (Grove 2000:277). On Chalcatzingo Monuments 1 (Figure 4) and 9 (Figure 5), the quatrefoil is the dominant feature (Grove 2000b). Monument 9 is a face of a jaguar with “nearly goggle eyes and flame eyebrows” and a large central quatrefoil mouth (Grove 1968:490). The quatrefoil was large enough to function as a “portal” through which a ruler could pass (Guernsey 2010:78). Monument 1

depicts a U-shaped partial quatrefoil. The quatrefoil is decorated with crossed bands inside an oval eye, plants growing on the exterior, rain clouds and droplets above, and an “elaborately decorated personage” seated on a bench holding a bar within the quatrefoil (Grove 2000:79). The identification of the quatrefoils on these two monuments rests on the idea that, since caves were breaks in the surface of the earth, then the earth could be depicted as a monster; therefore, these quatrefoils, as the mouths of an earth monster, were representations of caves.

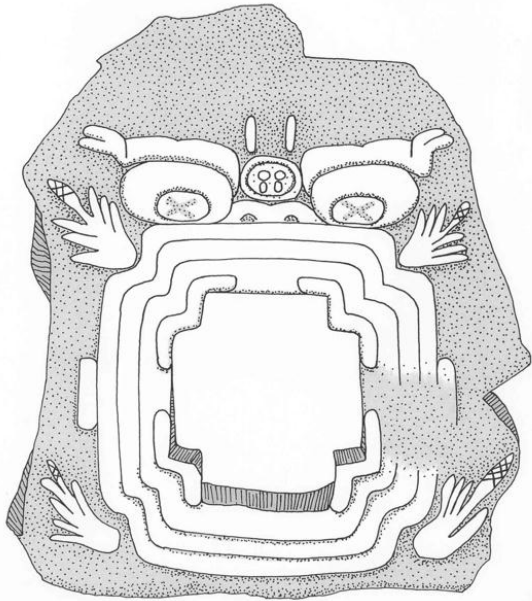


Figure 4 Monument 1 (left), Chalcatzingo

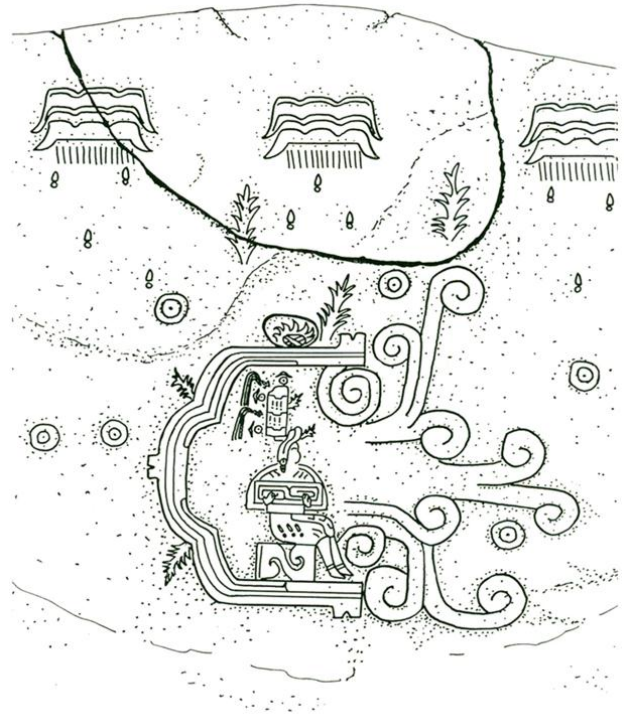


Figure 5 Monument 9 (right), Chalcatzingo

Images courtesy of and drawings by Dr. David Grove. Originally published in *Chalcatzingo: Excavations on the Olmec Frontier* (1984).

There are notable differences between these quatrefoils. First, Monument 1 is curvilinear in form whereas Monument 9 is rectilinear. Second, Monument 1 is a partial quatrefoil, whereas Monument 9 is complete. Finally, while both have been interpreted as depictions of monsters, they vary in the iconographic depictions. Monument 9 depicts a jaguar monster with goggle eyes, whereas in Monument 1 is an earth monster with cross-band eyes (Grove 1968). The main similarity between the two monuments is the quatrefoil as the mouth of the monster and the vegetative element sprouting from the corners of the quatrefoils. However, the contexts are also variable. Monument 1 has a person seated inside, whereas Monument 9 does not. Furthermore, there is water associated with Monument 1 but not with Monument 9. Nonetheless, despite the

limited similarities and the differing contexts and forms with each monument being the depiction of a different monster, the quatrefoils on both of these monuments are widely interpreted as caves. Furthermore, the identification of the quatrefoil as a cave on these monuments serves as the precursor for future quatrefoil-cave-mouth interpretations. In the following chapters I criticize this assumption, arguing that it lacks substantial evidence.

The quatrefoil motif becomes even more prominent during the Late Preclassic Period. Izapa Stela 8 depicts a ruler seated on a throne within a quatrefoil frame on the back of a zoomorphic creature (Figure 6) (Guernsey 2006). The zoomorphic creature is identified as being reptilian, possibly a turtle (Guernsey 2006:136). Izapa Stela 27 also has a quatrefoil, this time appearing on the trunk of a tree that forms the body of a zoomorph (Figure 7) (Guernsey 2010:84). Like at Chalcatzingo, these two quatrefoils exhibit intra-site variation. Izapa Stela 8 is curvilinear in form, whereas Stela 27 is rectilinear in form.

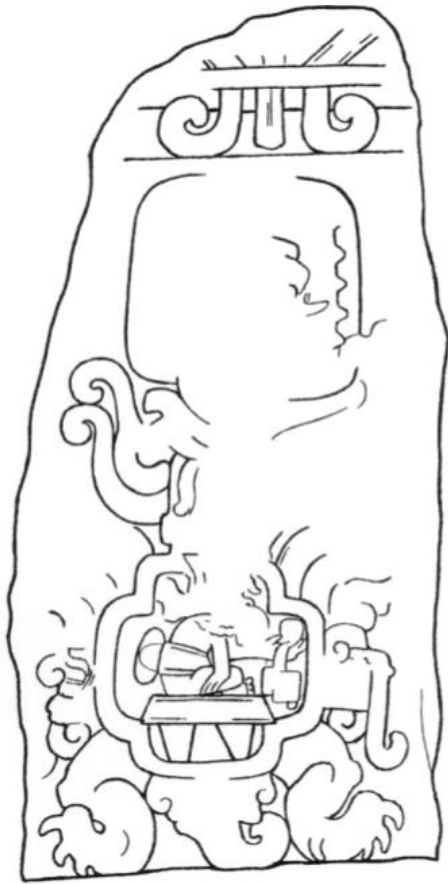


Figure 6 Stela 8 (left), Izapa



Figure 7 Stela 27 (right), Izapa

Drawings by Ajax Moreno, courtesy of the New World Archaeology Foundation.

Quatrefoils first appear in the Maya area at the beginning of the Late Preclassic Period at the site of Abaj Takalik, Guatemala. Abaj Takalik Altar 48, dating to 400-200 B.C., depicts a seated individual emerging from the body of crocodile or reptilian creature with the body depicted as a quatrefoil (Figure 8) (Guernsey, et al. 2010). The quatrefoil on this altar is curvilinear in form. Quatrefoils also appear in the Late Preclassic Period at the Maya site of San Bartolo, Guatemala. The west wall of the Pinturas Sub-1 chamber has a quatrefoil frame surrounded by water volutes with three individuals seated inside (Guernsey 2010). This quatrefoil, while only partially preserved, is observed to be curvilinear in form. The quatrefoil is

also personified with a possible turtle head extending from the left side (Love and Guernsey 2007). The individuals seated inside the quatrefoil are identified as Chak on the left, the Maize god in the center, and a god of “standing or terrestrial water” on the right (Guernsey 2010:85). In addition, the east wall of the chamber has another quatrefoil frame, this one with a seated zoomorph inside (Guernsey 2010).

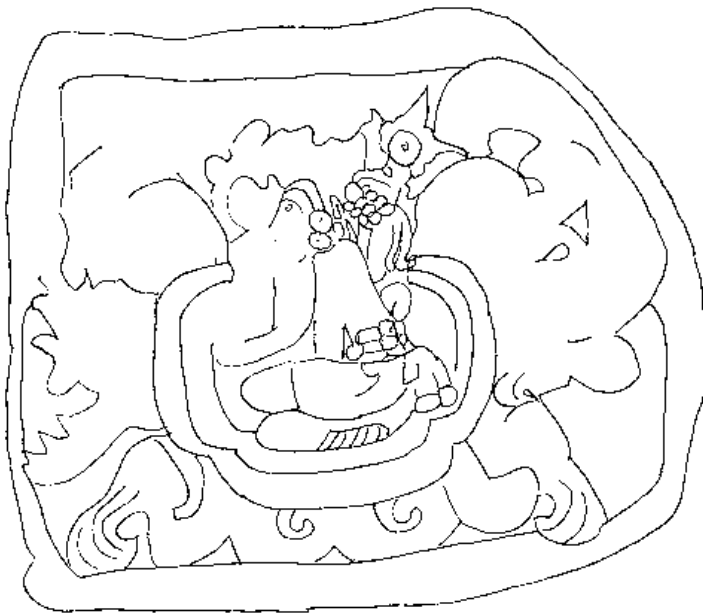


Figure 8 Altar 48, Abaj Takalik

Drawing by author. Detail from Crista Schieber de Lavarreda and Miguel Orrego Corzo, *El Altar 48 de Tak'alik Ab'aj: Monumento al Nacimiento de la Cultural Maya* (2009).

The early quatrefoils indicate that while there was significant variation in form and context of the quatrefoil, there were also apparent similarities in form, context, and use. The differences in the early quatrefoils are significant. The use varies from a mouth (Chalcatzingo Monuments 1 and 9), the back of saurian creature (Izapa Stela 8 and Abaj Takalik Altar 48), a basin (the Aguacatal Altar and La Blanca Monument 3), to a tree fetamorph/zoomorph (Izapa Stela 27). It is used as the main component or an element with a scene. Its form varies from

curvilinear to rectilinear and from complete to partial. It is found on a variety of materials including stone, stucco and earth as well as in a variety of monument types that includes stela, monuments, altars, and murals. These examples of the quatrefoil demonstrate significant early variation in regards to the motif.

While the differences are easily discernable, so are the similarities. First, with the exception of Izapa Stela 27 and Chalcatzingo Monument 9, which are rectilinear, all the early quatrefoils are curvilinear in form. Second, San Bartolo, Takalik Abaj, Altar 48, Izapa Stela 9, Chalcatzingo Monument 1 all have seated individuals inside. Third, the individuals in all of these quatrefoils are seated on what can be identified as thrones, indicative of a connection to rulers (Grove 1968; Love and Guernsey 2007; Saturno, et al. 2005). Fourth, water elements are found on La Blanca Monument 3, the San Bartolo mural, Chalcatzingo Monument 1, and the Augacatal altar. Fifth, Izapa Stela 8, San Bartolo, and Abaj Takalik Altar 48 have saurian or turtle iconography present on them. Finally, there is an otherworldly association in the form of deities on the mural at San Bartolo, the monster faces of Chalcatzingo Monuments 1 and 9, and the tree monster on Izapa Stela 27. Analysis establishes a set of themes including water, the earth, otherworld, and portals as early the Middle Preclassic (Guernsey 2010). While it has been suggested that the quatrefoil during the Preclassic Period had concordant meaning throughout Mesoamerica because of similarities in use, this idea ignores the differences in context and form (Stross 1996:91).

2.4 Previous Scholarship

The generally accepted interpretation of the quatrefoil is that of symbolic cave (Bassie-Sweet 1991, 1996; Baudez 1993, 1994; Brady and Ashmore 1999; Chouinard 1995; Fash 2005,

2009; Grove 1968, 2000a; Guernsey 2006; Guernsey 2010; Guernsey, et al. 2010; Hellmuth 1987; Houston, et al. 2005; Love and Guernsey 2007; Schele and Freidel 1990; Stone 1995; Stone 2005, 2009; Stross 1996, 2007; Taube 2004; Vogt and Stuart 2005); however the quatrefoil has been interpreted additionally as a portal (Stross 1996), a cosmogram (Guernsey 2010), and a signifier of a watery environment (Fash 2005, 2009). These other interpretations are thought of as supplementary to, instead of disparate from, the cave interpretation. The persistent interpretation of quatrefoils as caves has invariably conflated the two meanings, but without the support of significant evidence. Exploring the validity of this interpretation necessitates the review of the previous scholarship in regards to both caves and quatrefoils.

2.4.1 Of Quatrefoils and Caves Part I

The surge in cave scholarship during the 1980's provided the foundation for the subsequent rise in interest in caves and their role in Maya worldview. Caves, once significantly under-studied (but see J.E.S. Thompson, 1959), came to the forefront of archaeological investigation during this period (e.g. James Brady 2005, Keith M. Prufer 2005, Evan Vogt 2005, Karen Bassie-Sweet 1991, 1996, Andrea Stone 1995, Barbara MacLeod 1978 and Dennis Puleston 1978). As a result, our understanding of caves changed dramatically within a short period of time and caves were established as the loci of important rituals that were regarded as "immense, living, sentient, sacred and powerful" features within the landscape (Brady and Ashmore 1999).

At the forefront of cave scholarship was the question of what constituted a cave in Maya worldview. First, what constituted a cave in Maya worldview had to be established. Generally, it has been assayed that the Maya defined a cave as any break in the surface of the earth. This

exceedingly broad definition encompasses a wide variety of natural features including cenotes, fissures, sinkholes, caves (as defined in western science), and water features such as ponds, lakes, and reservoirs (Brady and Ashmore 1999:124). Also included in this definition are artificial caves such as those constructed in architectural features (Benson 1985; Brady 1997; Vogt 1964). Furthermore, this definition also encompasses caves manifested in the art and iconography of the Maya.

The broad definition of a cave in turn conflated caves with a significant number of associations. Caves are generally regarded as symbolic portals to the underworld (Brady 2003:87; Brady and Prufer 2005:367). Not only could caves provide transitions between world levels, but they could also simultaneously exist in more than one plane, inherently denoting them as liminal locales (Chase and Chase 2009:233). Other associations with caves primarily come from the ethnohistoric and ethnographic sources with some evidence from the archaeological record. Caves were thought to channel earth, atmospheric, and underworld elements- such as wind, rain, lightning, water, death, and foliage- thus linking caves to concepts of fertility and emergence (Bassie-Sweet 1991; Stone 1995).

A consequence of this interest was the exploration of how caves figured into the iconography and epigraphy. The Ch'een glyph has been identified by Stuart as the "cave glyph" (Vogt and Stuart 2005:157). Vogt and Stuart suggest that, since this glyph is common throughout the Maya region and, assuming this interpretation is correct- caves were an important "topic of discussion" (Vogt and Stuart 2005:157). While there have been focused studies on the cave hieroglyph, no similar study exists on cave iconography. The range of possible iconographic representations of caves includes open jaws, mouths of monsters (such as the earth

monster), niches, enclosures, doorways, eyes, clefts, and quatrefoils (Bassie-Sweet 1991; Stone 2005; Stross 1996; Taube 2003). Stone (1995:34) asserts that defining a cave in iconography is inherently difficult due to the fact that caves as a general concept are “fluid, polysemic, [and] sometimes contradicting.”

2.4.2 Literature on the Quatrefoil

The first study to focus the iconography of the quatrefoil in detail was by Stross (1996, 2007). Stross (1996) explores Zapotec depictions of the cosmic portal. The quatrefoil is not the only focus of his research but rather a subsequent theme due to his identification of the quatrefoil as a cosmic portal. Stross (1996:83) argues that the portal is a “traditional symbol” with shared attributes throughout the Maya region. More specifically, Stross (1996:83) identifies quatrefoils as cave-portals to the otherworld, asserting that his interpretations can be applied cross-culturally by noting that similarities illustrate analogous functions.

The only study to date that focuses specifically on the quatrefoil is by Guernsey (2010). Guernsey (2010:75), concludes that the quatrefoil, despite its variations in forms and context, maintained “consistent associations with watery portals, caves, elite power, and supernatural communication.” Guernsey argues that the quatrefoil in certain forms relates to the “ik” sign, flowers, and the kan cross. Furthermore, she argues that during the Preclassic Period different quatrefoil forms could substitute for each other; however, that this was not the case during the Classic Period. While Guernsey (2010:75) acknowledges the significant diversity in portrayals of the quatrefoil, conceding that it was versatile in meaning and not limited to solely cave contexts, she still supports the quatrefoil-cave connection and bases her research on the validity of this assumption. Guernsey uses an all-inclusive data set of Preclassic Period quatrefoils;

however, the Classic Period Maya quatrefoils that she uses were purposely selected to support her idea that quatrefoils functioned the same way through time and space.

Several other scholars have explored the quatrefoil as it pertained to other larger motifs and ideas in Maya culture. Both Gillespie (1993) and Grove (2000) discuss the quatrefoil as a cosmogram with the interior being the “cosmic center.” In addition, Bassie-Sweet (1996:66) argues that the four-part symbolism of the quatrefoil is representative of the “four sacred caves on the horizon.” While this idea that the quatrefoil was a cosmogram is presented, in these works none scrutinizes the assertion that the quatrefoil was an iconographic depiction of a cave. Fash (2005:2009) also discusses the quatrefoil symbol in detail. In her articles on water management at Copan, Fash demonstrates that there was clear connection between water and quatrefoils at that site. She (2005:119) concludes that the quatrefoil was simultaneously representative of “caves and water holes and the portals leading to them” because “they can be understood to be aspects of the same natural phenomena.” Finally, Baudez (1994:260-261) in a small section of his book on the iconography of Copan addresses the quatrefoil specifically at that site summarizing that it was used as an underworld sign.

While a study of the iconography of the quatrefoil has been notably lacking, there has been substantial exploration of quadripartite glyphs and symbols, which include similar depictions to the quatrefoils found in the iconography. The quadripartite glyphs include the Kan cross, the Kin sign, the Lamat glyph, and the completion sign (Coggins 1980:728). Clemency Coggins (1980) argues that these four-part Maya figures refer to calendric cycles and cosmic ordering. The four-parts can be seen as the main places along the path of the sun during its daily cycle, thereby relating the four-parts directly to the four-part division of the universe. Mathews

and Garber (2004) expand on Coggins' idea of the quadripartite motif as representative of cyclic completion, arguing that it is also a metaphor for creation (Mathews and Garber 2004:49).

Relying on analogy with contemporary Maya beliefs, they further propose that the concept of four-part partitioning was a critical element in a wide range of ritual activities.

Taube (2004) has also explored the quadripartite symbol, stating that the "four-petalled form" originates in Olmec iconography (Taube 2004:90). Furthermore, when the form is found in Classic Maya iconography, it is representative of a flower in the form of a "quatrefoil-cave" (Taube 2004:71 see figure g). House E from Palenque is decorated with several flower-quatrefoils with signs for wind or aroma emanating from the corners (Chouinard 1995:146). However, not all flowers are quatrefoil in form, suggesting the quatrefoil shape is potentially representative of a specific meaning. Taube, while acknowledging the visual similarities between the flower and the quatrefoil, argues that quatrefoil-flowers denote a cave. However, an alternative interpretation is possible. Perhaps the quatrefoil here is merely representative of a flower with four-parts denoting either creation or cyclic ending. The prior discussion associates the quadripartite glyphs and symbol with concepts of completion, calendric cycles, zero, and flowers; however, specific meaning most likely depends on context and form.

2.5 Problem Statement

In this section I review the various problems with the current interpretations of the quatrefoil. First, the cave interpretation has yet to be subjected to scrutiny. Modern scholars have indiscriminately accepted the "same corpus of interpretation" in regards to the quatrefoil as a cave (Baudez 1999:1). The lack of discussion of alternative options has created what can be deemed "cumulative knowledge" and not "scientific progress" (Baudez 1999:1).

Second, the assumption that quatrefoils are caves is partly attributable to methodological procedures that fail to maintain consistency, such as the use of “syllogisms” (Baudez 1999:1). For example, caves are sometimes depicted with maize and quatrefoils are sometimes depicted with maize; therefore, quatrefoils are caves. Another issue is the use of “chains of metaphors” such as (A looks like B looks like C; therefore, A is C)” (Baudez 1999:1). For example, quatrefoils look like mouths, mouths look like caves; therefore, quatrefoils are caves. Quatrefoils also have been subjected to what can be described as “daisy picking,” defined as “creating a larger area in which to hunt for substitutions and associations, thus making an argument possible,” (Baudez 1999:1). Lastly, another pitfall of quatrefoil interpretation is “over interpretation,” defined as “going beyond what the evidence allows one to infer reasonably” (Baudez 1999:1). All of the above demonstrate fairly common problems with iconographic interpretations and can be specifically demonstrated with the quatrefoil.

Third, although the quatrefoil, as a pan-Mesoamerican symbol with significant time depth, has been a subject within numerous studies, none of these studies have focused on the Classic Period. The studies that do exist are limited to time period (e.g., Guernsey 2010, who focuses on the Preclassic Period) or geography (e.g., Stross 1996, who focuses on the Zapotec). The quatrefoil, however, comes to prominence during the Late Preclassic Period transitioning into a prominent Classic Maya symbol. There are a significant number of quatrefoils from the Classic Period, only the examination of the quatrefoil during this period can demonstrate continuity or discontinuity in meaning (Stross 1996:99). Furthermore, the significant variability of the quatrefoil within Mesoamerica during the Preclassic and Classic Periods suggests that it encompassed a broad range of meanings.

Fourth, the similarities between the quadripartite glyphs and symbols suggest the possibility of similar meanings depending on context. While there is substantial evidence that the quatrefoil in its glyphic form is identifiable with cosmic ordering, calendric cycles, and period endings such meanings have not been extended to other examples and contexts.

Finally, recent re-evaluations of monuments that have the potential to affect current understandings have been largely ignored (e.g., Grove 2000) The commonly held idea that caves functioned specifically as portals to the underworld has recently been reevaluated to encompass the entire otherworld. Stone (1995:37), suggests that the caves were connected to the cosmic center and earth in lieu of the underworld. This idea has the potential to place caves in a broader context.

The interpretations presented in the recent literature on the quatrefoil originate from the interpretation of the quatrefoils on Chalcatzingo Monuments 1 and 9 as symbolic caves. Grove (1968), argued that the shape of the quatrefoil as the mouth of the earth/jaguar monster represents the quatrefoil as cave in that it functions “as a living extension of the earth” (Stone 1995:22-23). Therefore, the subsequent analyses of the symbol fundamentally assumed the cave-quatrefoil interpretation is correct. However, recently Grove (2000:280) has reevaluated Monument 1 from Chalcatzingo, citing the upturned corner of the mouth, elongated eye, oval eyeball containing cross-bands, and the presence of “sky” fangs to mean that the quatrefoil is actually the mouth of the “serpent supernatural” and not of the jaguar/earth monster. In addition, Grove (2000:283) argued that the quatrefoil here is similar to the mountain-glyph/place-glyph from Monte Alban. He now proposes that rather than a cave to the underworld, this monument

depicts a mountain/sky cave. While his argument has yet to be fully accepted by other scholars, it does suggest a more complex meaning for early quatrefoils.

2.6 Summary

In this chapter I reviewed the role of quatrefoil in Maya worldview and cosmology, I demonstrated that significant early variability existed in the quatrefoil during the Preclassic Period, suggesting that despite some consistency the quatrefoil cannot be limited to cave contexts. Furthermore, I reviewed the current scholarship on quatrefoils, analyzing the problems and noting the missing data. Finally, I reviewed the problems with an interpretation of quatrefoils as caves. The result is a range of potential meanings for the quatrefoil that include possible relationships to period ending rituals, calendric cycles, portals between worlds, the cosmos, water, the earth, and the elite. I hypothesize that the quatrefoil, following Gillespie's (1993) definition, may be more accurately defined as a cosmogram rather than a cave. The analysis and discussion presented in the following chapters aims to evaluate this hypothesis.

CHAPTER 3: THEORITICAL BACKGROUND AND METHODOLOGY

3.1 Introduction

The quatrefoil's spatial and temporal persistence in Maya iconography and epigraphy demonstrates that it was an important vehicle for communicating information and intentions. Since meaning is necessarily "constituted by convention," understanding the quatrefoil requires placing it within the "larger sociocultural system" (Hanks 1989:9). This chapter provides a review of the theory utilized in this thesis to make iconographic interpretations. The analysis of methodological procedures can demonstrate how the quatrefoil can be placed into a larger ideological context. First, the theory of semiotics is addressed and how this theory can be applied to iconographic interpretations. Then, the interrelationship between ideology and power is analyzed with the goal of examining how this relationship shapes what is depicted in Maya word and image. Finally, through the use of the systematic approach, contextualization, and analogy for the creation and categorization of the data and their meanings this chapter will demonstrate how better interpretations can be generated.

3.2 Images and Meaning

The interpretations of the quatrefoil presented in the following chapters are contingent upon the idea that for the Maya images functioned to communicate messages "grounded in shared understanding" (Gillespie 1993:67). As Gillespie (1993:67) states, if "all facets of culture are patterned *then* art must reflect society." However, when studying the quatrefoil as an iconographic symbol and motif, one is faced with the nuances of potential disparate meanings (Clancy 2009). The quatrefoil, as a symbol encoded with meaning, necessitates the

understanding of how and what messages were conveyed in Mesoamerican iconography. How messages were conveyed can be answered through a review of the theory of semiotics as it applies to iconography. What messages were conveyed can be understood through the exploration of Mesoamerican ideological systems and how these systems played a determinate factor in what was depicted in the iconography. While the study of iconography does not always incorporate semiotics, following the definition presented by Smith (2005) of iconography as the study of the units that form the subject matter (e.g. the work of art in its entirety)-such as the symbols, icons, and abstractions-semiotics can be an instrumental tool in the understanding of how, what, and why messages were conveyed.

3.2.1 Semiotics

Semiotics is a multi-disciplinary field focused on the “study of the innate capacity of humans to produce and understand signs [. . . and which] investigates sign systems and the modes of representation that humans use to convey their emotions, ideas, and life experiences” (Preucel 2010:5). Signs, the focus of semiotics, can be defined as “something which stands to somebody for something in some respect or capacity” (Pierce 1984:228). The term “semiotics” was first coined by John Locke (1894). Later, the field was developed as a modern discipline by Ferdinand de Saussure who created the “linguistic” aspect of semiotic theory and Charles Sanders Peirce who developed the “philosophical” aspect (Preucel 2010:3 6). Singer (1978) built upon the work by Peirce and Saussure and linked the “analysis of meaning to social context” (Mertz 2007:338). Semiotics hinges on the idea that signs carry meaning by “creating a connection between the object and the interpretant,” suggesting that the meaning could be “analyzed through systematic analysis of context and history” (Mertz 2007:338-339).

Semiotics in archaeology provides an approach to understanding signs and their meanings in culture. New approaches in semiotics have led to the study of “social semiotics,” the theory employed in this thesis (Preucel 2010:8). In social semiotics, the shift is away from classifying signs and meanings towards understanding their “contextualization” (Preucel 2010:8). Within semiotics, *contextualization* is the idea that signs in and of themselves do not hold meaning but rather meaning comes from “practices which construct semiotic relations among material processes and social actions” (Preucel 2010:8). Essentially, the function of a sign is dependent on how it is embedded in use (Parmentier 1997:51). Furthermore, meaning can only be ascribed to “the moment of interaction between the artifact and the person” and does not reside in artifacts or in people themselves (Pauketat 2000:116). Parmentier (2000:51) proposes three necessary questions for evaluating meaning: (1) what is the nature of material; (2) what is the status of the relationship between the form and the surrounding cultural traditions; (3) how is the sign potentially interpreted, by whom, and for what purposes?”

When applying semiotics to iconography, it is necessary to understand how signs are categorized. While many of the terms associated with semiotics have variable definitions, in this thesis I utilize the classifications by Pierce (Barber 2005; Smith and Berdan 2003). The quatrefoil can be broadly be defined as a sign; however, according to Pierce, signs can be broken down into three units, icons, indexes, and symbols, based on their relationship to objects (Preucel 2010:56). Pierce defines *Icons* as “signs that refer to an object by virtue of its characteristics;” an *Index* as “a sign that denotes its object by being affected or modified by that object;” and a *Symbol* as “a sign that obtains its characteristics by virtue of some law, usually an association of general ideas” (Preucel 2010:56). Notably, however, these units are not “types” but rather

“stages or moments in the hierarchical complexity of semiotic functioning” in which overlap between categories is bound to occur (Parmentier 1997:49). Following these definitions the quatrefoil can be classified as a *Symbol* because it has a conventional link between the “signifier and signified” (Preucel 2010:65). In addition, in this thesis the quatrefoil will also be referred to as a *motif*, defined following the Merriam Webster definition, as a “decorative design and pattern” or a “distinctive feature.”

3.2.2. Ideology and Power

In Mesoamerica there was a generally accepted worldview and ideology that structured how people viewed and orientated the world around them. Iconography, as a product of material culture, necessarily reflects a shared ideology. In the application of social semiotics to iconography in Mesoamerica, the quatrefoil becomes a powerful symbol because of its ability to place the actor within the cosmic center. Furthermore, as a symbol with a long duration, it denotes that it had a generally agreed upon “system of symbolic values assigned to the image” (Looper 2003:31). This transfers the quatrefoil beyond merely a symbol that incorporates worldview to one that is placed within an ideological framework.

Worldview, and cosmology as a function of it, can be defined as the way in which the Maya conceptualized their world (Rice 2004:9). So how do these concepts become part of ideology? Worldview and ideology intersect when the latter is manipulated to negotiate power and legitimize specific political connections and relationships. Defining ideology is, however, inherently more difficult because of debate on what it is and how it operates. For the purpose of this thesis, the definition of ideology is extended beyond the general idea of the encompassed belief and value systems of a society (Demarest and Conrad 1992:4) to include power relations

and politicization. Ideology can therefore be defined, following the Marxist tradition, as the “views, attitudes, beliefs, and values that are appropriated, projected, rejected, and modified for political ends by specific interest groups” (Comaroff and Comaroff 1992; Pauketat and Emerson 1999:303). For the Maya, the specific interest group was the elite, who used and projected the dominant ideology to maintain and control hierarchical power.

In Mesoamerica, literacy is believed to have been restricted to the elite. Iconography, as the expression of conventional symbols that could be broadly understood, therefore functioned as an important “tool of the state” (Marcus 1992:7) through which those in power could selectively disseminate knowledge based on a conventional knowledge system about how their world was constituted (Gillespie 1993:73). On many elite artworks, iconography appears in conjunction with epigraphy. The epigraphy functioned to either complement or supplement the iconography, and together they created a narrative (Looper 2003:33). The narratives presented on these artworks are not history in the Western sense of the word, but are more accurately understood as stories that intertwine mythology with reality; however, these two ideas were not necessarily exclusive in Maya thought. The narratives presented in iconography functioned as propaganda displayed by the ruler to establish, maintain, promote and/or legitimize their rule by demonstrating their power (Marcus 1974).

Power in Mesoamerica is essentially the ability of a few to “coordinate and control action in ways that most individuals cannot” (Pauketat 2000:113). This distinction also defines the separation between the elite and the commoner, where the elite are defined by their ability to retain control whereas the commoner restricts their own ability to “coordinate action in the future” (Pauketat 2000:114). This distinction is present in the iconography. The display of

differential access to power, such as a ruler's ability to occupy a liminal condition and communicate or travel between worlds, sanctifies the extant hierarchy (Marcus 1974:83). The quatrefoil appears in both elite and non-elite contexts; however the majority of examples are from the former. Subsequently, the quatrefoil necessarily relates to the lives of rulers. As a result, the focus of this thesis will be on meaning of the quatrefoil as a potential political symbol with the potential to "generate, embody, translate, or direct 'power'" (Parmentier 1997:58).

3.3 Methodology

This thesis addresses the quatrefoil as used by the Maya during the Classic Period. The data set employed in this thesis was developed specifically to address the problematic interpretation of the quatrefoil. Theoretically, a synthesis of quatrefoils will enable more detailed interpretations (Clancy 2009:7). Consequently, in order to create a more accurate interpretation, the research necessitates a review of how the data employed in the thesis were selected and analyzed.

The data utilized in this thesis were gathered from a variety of sources. Quatrefoils were first located from previously identified examples in published literature (e.g. Guernsey 2010, Stross 1996). Secondly, sources were expanded to include scholarly publications with photographs and/or drawings of monuments from Maya sites. Specifically, the Catalogue of Maya Hieroglyphic Inscriptions (Graham, et al. 1997) and the Chronicles of Maya Kings and Queens (Martin and Grube 2008) were useful references which provided an overview of monuments and inscriptions from throughout the Maya region. Additionally, site specific sources of monuments were incorporated, including data from Copan (Baudez 1994), Palenque (Robertson 1983, 1985a, b, 1991), Caracol (Beetz and Satterthwaite 1981), Quirigua (Looper

2003; Sharer 1978), Piedras Negras (Clancy 2009) (Sharer 1978) and Tikal (Jones, et al. 1982). Furthermore, online publication sources were also useful resources, including the Corpus of Maya Hieroglyphic Inscriptions published through the Peabody Museum, Harvard, and the online photo and drawing collections of Montgomery (2000) and Schele (2005) published online through FAMSI. Finally, when possible, the previously stated sources were also supplemented by other peer-reviewed academic publications. It should be noted that by limiting sources to published corpuses, monuments from sites that have not been subjected to long-term studies may have been missed. Nonetheless, the goal was to create a comprehensive enough database to detail an accurate and broad representation of quatrefoils.

In order to create an unabridged database that accurately portrays distribution temporally and geographically, quatrefoils were specifically selected for the Classic Period. Additionally, restrictions were implemented. While the goal was to conduct a comprehensive analysis of the quatrefoil, examples were restricted when they did not meet a set of standards or were outside the scope of the study. Of the selected quatrefoils, those where photographs and drawing were not locatable were omitted in order to avoid misidentification. In addition, monuments where erosion limited the ability to clearly see details were also excluded. Furthermore, more examples were restricted to those found in elite contexts. Generally this limited my sample to those found on stone and on monumental architecture. Ceramics were excluded because they are generally found in different contexts and represent a significantly different media source, which inherently signifies potentially disparate meanings. Furthermore, the problems with forged and/or repainted ceramics is common in the Maya region (Chase and Chase 2009; Chase, et al. 1988) and additionally adding these to analysis would confound any interpretation of ceramic based

quatrefoils. Quatrefoils were also excluded when they lacked specific provenience, with the exception of monuments where the site is known but without an exact location; meaning cannot be affirmed without context.

Some previously identified quatrefoils were also omitted due to significant variation in form and presentation from the standard definition. First, previously identified quatrefoils that do not fit the definition such as those on the mouth of a tzuk sign on a loincloth worn by a figure were eliminated; while similarities exist, their form does not necessarily indicate a quatrefoil, this warrants a more specific independent investigation. In addition, while partial quatrefoils were included in this thesis, those that were distinguished as trefoils or t-shaped, were excluded. Finally, since the focus of this study is on the iconography, quatrefoils that are glyphic in nature were excluded.

Quatrefoils were also restricted by time period and location to the Classic Period (ca. AD 250-900), so as to have a focused study. The Classic Period is temporally significant because the quatrefoil comes into prominence during this era (Sharer and Traxler 2006:155). The Classic Period is subdivided into the Early Classic (ca. AD 250-600), the Late Classic (ca. 600-800), and the Terminal Classic (ca. 800-900/1100) (Sharer and Traxler 2006:155). However, since monuments were limited temporally to the Maya and the Southern Lowlands, only Terminal Classic monuments from these locales included. Categorizing these monuments into Early, Late and Terminal time Periods allowed for the exploration of intra-period variation. Furthermore, the scope of the study is limited to the Southern Maya lowlands. This limitation was employed because, while the Maya were subject to outside influences, the lowlands represent a somewhat unified tradition. However, spatial distribution can still be explored within the Maya lowlands.

The quatrefoils used here encompass a broad range of examples. Consequently, the methodological analysis employed in this thesis required the specific categorization of each quatrefoil. These categories included site, date, monument type, material, function, form, venue, and associations. The segmentation of quatrefoils into these categories serve to facilitate the understanding of the quatrefoil within the broader “discourse contexts in which they function as elements in larger constructions,” and it is within this context that meaning can be interpreted (Hanks 1989:9). Time and location are significant because they can be used to demonstrate variation. The style of a quatrefoil, as represented by form and function, was included in order to assess the “internal styles” that contribute to iconographic variations. Here, form refers to the individual manifestation of the quatrefoil and function refers to how it is used in the scene. The composition of each example was assessed by the further categorization of quatrefoils by monument type, venue, monument type, and associations. “Venue” refers to the location of the monument within the site, and “associations” refer to the other symbols, indexes, icons, and glyphs found within or around the quatrefoil. Together, the composition determines the overall context in which the quatrefoil was located.

3.3.1 Analogy and Contextualization

In this thesis, analyses are conducted through a variety of methodological techniques, with focus on the use of analogy. Analogy, defined as use of the “known” to understand the “unknown,” is a type of inferential argument in which the focus is on the relationship between things (Steward 1942:337). In archaeology, analogy is expanded beyond the “formal similarities between entities” to more accurately encompass the “inferential argument based on implied relationships between demonstrably similar entities” (Ascher 1961; Gould and Watson 1982).

The analogies in the following chapters are derived from a variety of sources including archaeology, epigraphy, iconography, ethnography, and ethnographic data sources.

In the thesis, the application analogy allows past situations to be illuminated as to similarities and discontinuities, both spatially and temporally, in the use of the quatrefoil. While there are many forms of analogy, I focus on the use of contextualization and analogies verified by the archaeology record. The basic model of a divisionally tri-layered and four-part (with a center) universe is visible in the archaeological record. For example, as cited by Chase and Chase (2009:225), the Postclassic murals of Tulum and Santa Rita Corozal contain water imagery on the lower planes showing the three layered aspect of the universe. More evidence comes from caches throughout the Maya region, such as the Late Classic cache from the Blackman Eddy site which was organized in a quadripartite fashion (Mathews and Garber 2004:52). In addition, the tomb at Rio Azul in Guatemala contained glyphs marking each wall with a cardinal direction (Mathews and Garber 2004:54). Additionally caches often mirror world divisions, such as at Santa Rita Corozal where a Late Postclassic cache was found that included four figures identified as bacabs, standing on turtles while conducting automutilation, connecting the cache to creation and the four cardinal direction (Chase and Chase 2009:224).

Contextualization is the method of using analogies at the local and regional scales both temporally and spatially to make comparisons (Looper 2003:31). This method is particularly applicable to the quatrefoil since it has a long span of use and was a pan-Mesoamerican motif.

3.4 Summary

This chapter provided the theoretical background and methodological procedures employed in this thesis, establishing the necessary foundation for the following analysis and

interpretations. Through the use of contextualization and analogy in concordance with a systematic analysis of the data, it is possible to ascertain what messages were conveyed by the quatrefoil. This, in time, provides a basic understanding of the meaning of this symbol. The goal of this thesis is to evaluate the validity of the connection that is made between quatrefoils and caves.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

This chapter provides a qualitative and quantitative analysis of the data in order to establish meaningful patterns relevant for future interpretations. Throughout, standard statistical procedures are employed to strengthen the analyses. First, the basic characteristics of the quatrefoil by focusing on the monument type, venue, form, and function are addressed. Next, through the generation of a detailed analysis of the major iconographic themes found in association with the quatrefoil, the symbols context as it relates to potential meanings is explored. Specifically, both the entirety of the context of the monuments and the intimate context is analyzed. Following this the spatial and temporal distributions of the quatrefoil are presented. Finally, a comparison of the Preclassic monuments with quatrefoils from the Classic Period is provided with the goal of determining if the two datasets are statistically similar enough to be considered analogous.

The database consists of a total of 70 monuments with 75 distinct quatrefoils from 15 different sites within the Central and Southern Maya Lowlands (Figure 9 Map of Sites with Quatrefoils). Each monument within the database was categorized according to site, date, monument type, form, function, venue, and associations. The entire dataset (Table 1) is included below in order to provide references for the following analysis.



Figure 9 Map of Sites with Quatrefoils

Site locations courtesy of Dr. Clifford T. Brown and Dr. Walter R. T. Witschey, © Electronic Atlas of Ancient Maya Sites.

BONAMPAK	STELA 1	LC	PALENQUE	TABLET OF THE SLAVES	
	STELA 2	LC		TEMPLE OF THE SUN PIER A	LC
CANCUEN	PANEL 3	LC		TEMPLE OF THE FOLIATED CROSS SOUTH JAMB	LC
CARACOL	ALTAR 1	EC		TEMPLE OF THE CROSS WEST JAMB	LC
	ALTAR 3	EC		THE CREATION PANEL	LC
	ALTAR 4	EC		PACAL SARCOPHAGUS COVER	LC
	ALTAR 6	EC		TEMPLE OF THE CROSS W/E SANCTUARY ROOFS	LC
	ALTAR 7	LC	PIEDRAS NEGRAS	STELA 1	LC
	ALTAR 11	LC		STELA 3	LC
	ALTAR 13	TC		STELA 8	LC
	ALTAR 14	EC		STELA 11	LC
	ALTAR 15	LC		STELA 35	LC
	ALTAR 19	LC		STELA 40	LC
	STELA 4	LC	QUIRIGUA	ALTAR R	LC
	STELA 6	LC		ALTAR Q	LC
COPAN	PECCARY SKUI	LC		MONUMENT 23	LC
	MOTMOT MARI EC		TIKAL	ALTAR 4	LC
	SCULPTURE 13	EC		ALTAR 10	LC
	N BALLCOURT	LC		LINTEL 2 STR. 5C-4	LC
	C BALLCOURT	LC	TONINA	MONUMENT 135	LC
	S BALLCOURT	LC	TRES ISLAS	STELA 2	EC
	TEMPLE 18 NW JAMB	LC	XULTUN	STELA 24	LC
	TEMPLE 18 NE JAMB	LC	YAXCHILAN	STELA 11	LC
	TEMPLE 18 SW JAMB	LC		LINTEL 9	LC
	TEMPLE 18 SE JAMB	LC		LINTEL 14	LC
	TEMPLE 18	LC		LINTEL 24	LC
	ALTAR W	LC		LINTEL 25	LC
EL PERU	ALTAR	LC		LINTEL 33	LC
MACHAQUILA	STELA 4	TC		LINTEL 46	LC
	STELA 7	TC		LINTEL 50	LC
	STELA 8	TC			
	STELA 10	LC			
NARANJO	ALTAR 1	EC			
	STELA 6	LC			
	STELA 13	LC			
	STELA 21	LC			
	STELA 24	LC			
	STELA 29	LC			
	STELA 40	LC			

EC: Early Classic
LC: Late Classic
TC: Terminal Classic

Table 1 The Database

4.1 Characteristics of the Quatrefoil

The significant variability in the presentation of the quatrefoils during the Classic Period has antecedents in the Preclassic Period, when the symbol first coalesced. Accordingly, the quatrefoil was never uniform in its presentation. As a result, in order to assess the entire range of its variability, the symbols are categorized according to a specific set of characteristics: form, function, monument type, and venue. Each of these categories reflects a choice made about the presentation of the symbol and therefore delineates information about how it was meant to be viewed. Subsequently, since meaning comes from the interaction between the object and the interpretant, these characteristics should be indicative of meaning.

4.1.1 Form

Following Guernsey's (2010) assertion that the Maya distinguished between forms, in this investigation quatrefoils were categorized according to the two basic presentation types (Figure 1). First, quatrefoils could be either complete or partial, where complete refers to all four-sided symbols and partial includes halved quatrefoils. Second, quatrefoils could be curvilinear or rectilinear, defined by the sharpness of the corner. Together, there are four possible permutations, all of which appear in the dataset (Figure 10). The overwhelming majority (82 %) of quatrefoils were complete and another 71 % were curvilinear. Together, 75 % of the examples were both complete and curvilinear, whereas a slightly lesser majority (57 %) was both partial and curvilinear. A chi square analysis with a .05 significance level revealed that the complete and partial quatrefoils did not differ significantly in the proportions of curvilinear and rectilinear (Table 2).

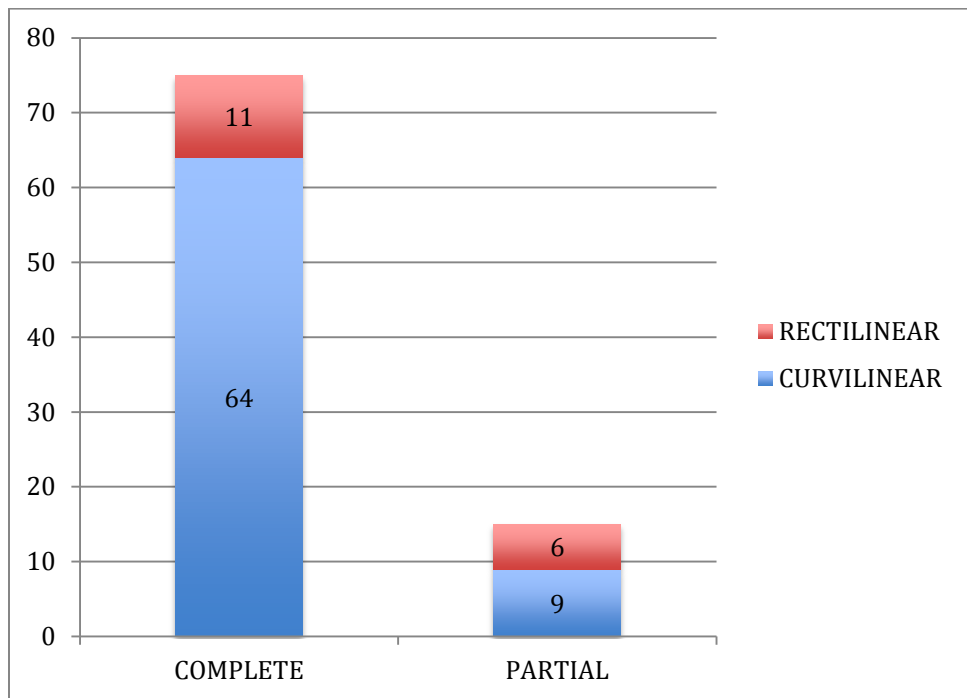


Figure 1 Stacked bar column showing frequencies of quatrefoil forms

Table 1 Chi square analysis of different quatrefoil forms

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.830 ^a	1	.176		
Continuity Correction ^b	.990	1	.320		
Likelihood Ratio	1.685	1	.194		
Fisher's Exact Test				.280	.159
Linear-by-Linear Association	1.805	1	.179		
N of Valid Cases	72				

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.11.

b. Computed only for a 2x2 table

4.1.2 Function

Quatrefoils were separated by function into frames, elements, and personal adornment. While these classifications are not always mutually exclusive, quatrefoils were categorized as only one of the three possibilities (Figure 11). Quatrefoils that encase other iconographic symbols, icons, or indexes were designated as frames and comprised 58% of the total. Quatrefoils that appeared as a constituent within a whole, but were not main features, were classified as elements, accounting for seven percent of the total. The remaining 35 % were categorized as personal adornment, which encompasses all aspects of costume and related paraphernalia.

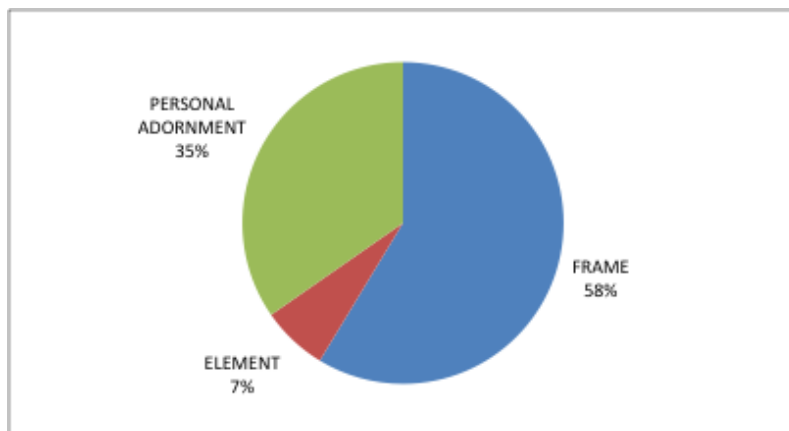


Figure 11 Pie chart showing frequencies of different functions

4.1.3 Monument Type

Classifying monuments by type is inherently difficult due to the significant variation in definitions within academia. As a result, monuments were placed into one of five general categories: stela, altar, wall panel, bench, and other (Figure 12). Stelae, defined as any freestanding stone monument (Clancy 2009), accounted for 33 % of the database. Altars, which are also known as pedestals, defined as any carved stone “slab like table” (Clancy 2009:12)

accounted for 34 %. While the features on superstructures have been subjected to numerous classifications, I group the related features such as jambs, piers, roof combs, and lintels together into the category of wall panel, defined as any carved or painted features set into, or on top of, a stone superstructure. These comprised 29 % of the database. Benches, accounting for two % of the database, are defined as features that are “built out from a wall to provide seating” (Clancy 2009:13). The remaining three percent of the monuments were categorized as other, encompassing the examples that did not fit into the previously stated categories.

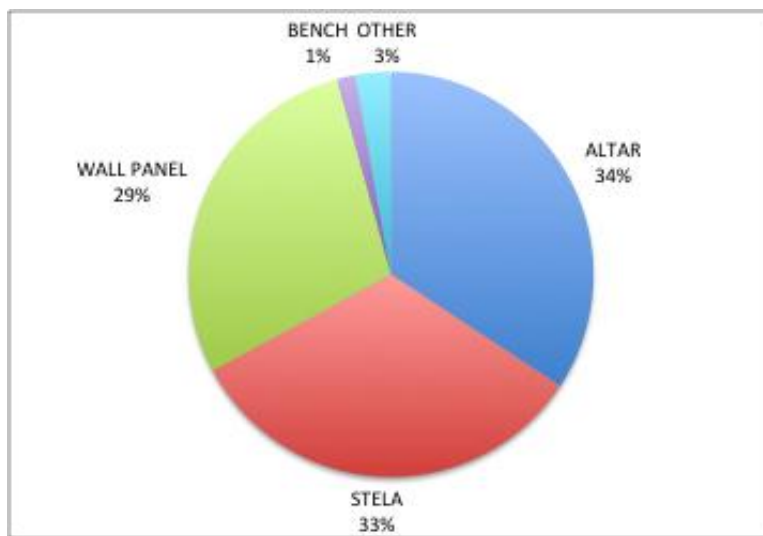


Figure 12 Pie chart showing frequencies of different monument types

4.1.4 Venue

Monuments were categorized by venue into platforms, plazas, ball courts, tombs, architectural features (exterior or interior), and miscellaneous (Figure 13). These categories delineate information about the accessibility of the monument. An architectural feature refers to wall panels attached to the superstructure. These features were further designated as exterior, when they were on the outside or façade of a superstructure, and interior, when were within. Following Clancy (2009), I generally classified lintels as exterior features because “the exact

location of the panels is [often] difficult to assess” and because these features were often found in front of buildings due to collapse (Clancy 2009:12). Exterior wall panels account for 12 % of the monuments whereas interior wall panels comprise only six %. Tombs, accounting for four % of the monuments, while part of the interior of a superstructure, were designated separately because this location denotes specific meaning(s) related to death and transition. Plazas, accounting for 41 %, include open public areas. Platforms, accounting for 16 %, were built raised features. Ball courts, while they can be considered plazas, have a distinct function and were therefore designated separately. They accounted for nine %. I also included miscellaneous (one %) as a classification used when the location within the site is known but where conditions such as collapse inhibited the determination of a precise location. Unknown (6 %) is distinct from miscellaneous and was used to classify monuments where the site is known, but the intra-site location was unknown due to looting or other factors.

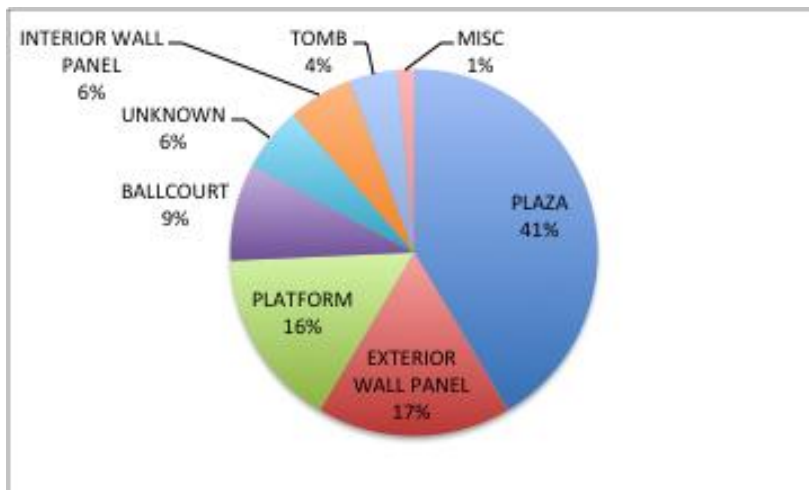


Figure 13 Pie chart showing frequencies of different venues

These venues can be further categorized according accessibility. The concept of accessibility, defined by Barber (2005:57), relates to intimacy where large public areas that “can accommodate large groups” such as plazas, and that can be considered accessible whereas

private areas, such as domestic households, have a more confined or restricted intimacy, allowing for “only a small number of participants and viewers.” Following this definition, plazas and ball courts are definably as accessible whereas platforms, tombs, and interior panels are features of intimate spaces. Excluding miscellaneous and unknown, this leaves exterior wall panels. Exterior wall panels are harder to classify because their accessibility is dependent on the exact location on a superstructure. Those that are at ground level facing a plaza could be considered accessible; however, determining the accessibility of raised features relies on the size of the image and text. Normally, these features were located higher on superstructures and were unlikely to be viewable by the entire population; therefore, they can generally be classified as intimate. Accordingly, 50 % of the monuments can be classified as accessible and 49 % as intimate.

4.2 General Associations

Mayan monuments, as mediums through which information was conveyed, depicted narratives through the combination of the text and image. Consequently, meaning can be elucidated through the examination of the both text and image. Generally, narratives in elite contexts refer to events related to ideology, power, and rulership; however, the text on a monument can be supplementary or complementary to the image. In addition, since this thesis is concerned with the iconography and not the text, the text is generally excluded from analysis with the exception of dates and relevant glyphs that denote location.

The iconography associated with the quatrefoils can be separated into two areas: the iconography in the surrounding context; the, iconography within or attached to the quatrefoils. I employ this distinction because the iconography surrounding the quatrefoil is indicative of the

general context in which the quatrefoil was placed, whereas the various icons, symbols, and indexes within or attached to the quatrefoil indicate specific meanings attributed to that quatrefoil. Accordingly, these different locations indicate potentially disparate meanings. In the following discussion, I assess each quatrefoil individually, as well as within the larger compositional field, in order to establish a foundation through which meaning can be determined.

4.2.1 The Iconography of the Surrounding Context

Establishing potential meaning requires examining the matrix the quatrefoil is placed within. Generally, there were several consistent iconographic themes associated with the quatrefoil. These included earth, otherworld, rulership, transition, and sacrifice (Figure 14). Notably, some of the signifiers were not mutually exclusive to one distinct category, but rather could be representative of more than one simultaneously. For each theme I provide an example from the dataset in order to clarify how they were identified. It is important to note that my perspective inherently determined what was included as a major theme in the surrounding context. While I tried to be inclusive it is possible that different scholars would have included other categories.

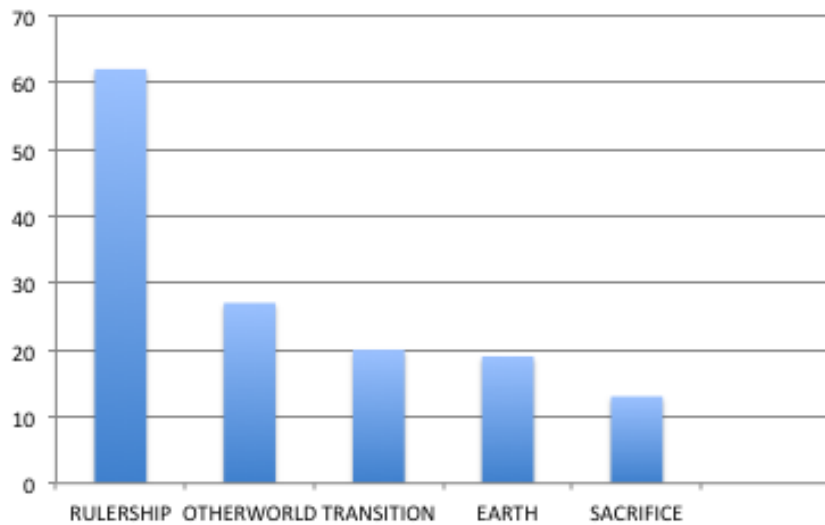


Figure 14 Bar graph showing the iconographic associations of the surrounding context

Elements of the three world-levels are commonly associated with the quatrefoil. Of the total monuments, 37.5 % are depicted with otherworldly iconography. The otherworld can be identified through the depiction of beings and creatures that are extramundane, often distinguished from humans by their exaggerated features. In addition, glyphic markers for otherworldly locations pertain to otherworld iconography. In some instances, the iconography delineates the upper or underworld more specifically. Denizens that are specifically located in the underworld can be identified by the presence of death markers or by “grotesqueness” (Wilson-Mosley, et al. 2010:26). Other indicators that denote the underworld include the numbers “7” and “9” as well as references to death and the color black. The upper world is commonly depicted or denoted by the presence of sky bands and celestial features such as the day sun, Venus, and other celestial bodies. Of the monuments depicted with otherworld iconography, 44 % were specific to the underworld and 15 % to the upper world.

The earth, or the middle-world, was defined by the presence of caaac signs, “tun” or stone symbols, vegetation, the “witz” or earth monster, as well as general earth bands. In

addition, the turtle, as a model of the rounded earth, also constitutes earth iconography (Taube 1988). Of the total monuments, 26 % were depicted with earth iconography.

Transition between world-levels was also a common iconographic theme associated with quatrefoils, denoted by the presence of a number of symbols, including umbilical cords, twisted ropes, water lilies, dwarfs, serpents, clouds, smoke, and mouth or jaws (Chase and Chase 2009). Personages, creatures, and plants could also denote transition- specifically, those that could live above and below the water such as saurian creatures and water lilies. In addition, the cosmic monster, often shown with a crocodile/saurian body and two heads, is frequently depicted in association with transitional life events. Deities can also denote transition when depicted in transitional states, such as the bacaabs who occupied a position between worlds by holding the earth up on their back or on their hands. Furthermore, major life events, such as birth, death, accession, and rituals, such as blood-letting and the ball game, can also denote transition (Chase and Chase 2009:26-28). 28 % of the monuments show quatrefoils with transition iconography.

Iconography relating to rulership was present on the overwhelming majority of monuments (86 %). Rulership is implied when a monument depicts an actor identified as an elite personage or ruler. However, this interpretation relies on the identification of figures within the monument representing a ruler's or an elites "actions and events" (Clancy 2009:14). The figures were identified as rulers based on the current scholarly interpretations and by their "dress, appearance, and hieroglyphic titles" (Palka 2002). Generally, the categories of characters depicted on elite monuments included "royal" personages (i.e. the ruler or part of the ruler's family and elite), generally depicted with more ornate costumes, captives, and otherworldly images including deities and ancestors. However, identifying a ruler or elite figures is difficult

because doing so inherently relies on a set of social models that may or may not be applicable to the Maya (Chase 1992). As stated by Chase (1992:30), the archaeological record does not readily support the common binary model of elite and commoner. Whether this model of class organization is applicable to the Maya is highly debatable, as is the use of the terms “elite” or “commoner” to describe persons within a more complex social organization. While I use terms like noble, elite, ruler and commoner, these terms may not accurately portray the actual social and political institutions.

Nonetheless, rulership is generally implied when the monument depicts elaborately adorned figures in the center of the image. These central figures are called “portraits” and are supposedly based on an actual persons as opposed to a mythical figures, such as deities (Schele and Miller 1992:66). Additionally, while generalities do exist, how portraits were depicted varies significantly between sites. The dress is particularly important because it is the symbolic presentation “of rank, wealth and prestige” (Schele and Miller 1992:66). Since preservation is an issue in the Maya region, royal costumes and regalia have been reconstructed mainly through their depictions on monuments and other artifacts. Schele and Miller identify three main costumes worn by the rulers: everyday dress; war; and, ritual costumes (Schele and Miller 1992:67). They state that war and ritual costumes differ from everyday garb by the use of “exotic materials” and more elaborate costumes. These additions include “ornate and weighty headdresses, masks, capes of complex design, large belts, loincloths, skirts of jaguar pelts, ornamented backracks, high-backed sandals, leg straps and ... jade and shell jewelry encased on the body (Schele and Miller 1992:67). Other aspects of the regalia that denote rulership are

bundles, scepters such as the Double-Headed Serpent Bar and Manikin Scepter, weapons such as the flint and shield, and transitional elements (Schele and Miller 1992).

Additionally, iconography that depicts ritual also necessarily relates to rulership. The rituals depicted on elite artworks were both symbolic acts and power processes that could be either occurring or implied (Schele and Miller 1992:66). Common rituals depicted on Maya monuments related to period endings, birth, accession, and death. Generally, ritual on elite monuments related to the lives of rulers. The final theme commonly associated with quatrefoil is that of sacrifice. While sacrifice can be considered a ritual, the high occurrence in this corpus suggests a particular importance. The common sacrifice iconography depicted on the monuments was either self-sacrifice or the sacrifice of a captive. Captives can be identified by their emaciated figures, hair-styles, and the presence of binding. Self-sacrifice is denoted visually by blood-letting or can be implied by the presence of sting-ray spines and other blood-letting instruments (such as the bowls used to capture the blood). The presence of vision serpents, conjured by the act of blood-letting, also denotes sacrifice. Of the total, 18 % of the monuments depicted sacrifice.

4.2.2 The Iconography of the Quatrefoil

While the general context of the quatrefoil is pertinent to the interpretation, the specific composition including the symbols, icons, and figures attached to and/or enclosed within the quatrefoil are more directly indicative of meaning. In order to assess the iconography specific to the quatrefoil, monuments were first separated by function. This was necessary because function has an interdependent relationship with the associated iconography.

4.2.2.1 Frames

Quatrefoil frames account for the majority (61 %) of the entire database. They are found at all of the sites except for Tonina, Xultun, and Yaxchilan. The Maya used quatrefoils as frames during the entire Classic Period; however the overwhelming majority are from the Late Classic Period (64 %). Interestingly, the earliest quatrefoil in the entire database is the Motmot Marker from Copan (Figure 22) dedicated in AD 441; the two latest monuments in the entire database also depict quatrefoils frames: Machaquila Stela 7 (Figure 23) and Caracol Altar 13 (Figure 24), both dedicated around AD 830.

Figure 15 shows the main iconographic associations within the quatrefoil frames. Rulership was the most frequent association and sacrifice was the lowest. While the general percentages mirror the entire database, calculating the exact percentage change better illustrates the differences (Table 3). Assuming that an over fifty % change has to occur for it to be considered significant, sacrifice is the only iconographic association with significant change, almost doubling in frequency.

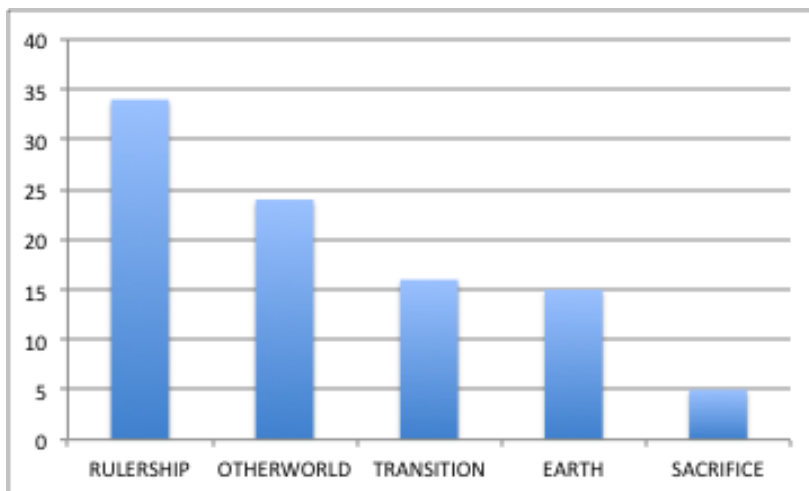


Figure 15 Bar graph showing the major iconographic themes associated with quatrefoil frames

Table 2 Table showing the percentage change in iconographic associations for frame quatrefoils

THEME	ENTIRE DATABSE	FRAMES	PERCENT CHANGE
RULERSHIP	85	79	-7.1
OTHERWORLD	46	56	21.7
EARTH	28	35	25.0
TRANSITION	29	37	27.6
SACRIFICE	22	43	95.5

The majority of the monuments contain one or more figures encased within the frame (58 %). A breakdown of these figures reveals there were a total of fifty-three individual figures with an almost even distribution between portraits encompassing all figures and otherworldly figures including deities, saurian, and other non-human creatures. Of the portraits, thirteen were rulers or elites, seven were unknown, two were captives, and eight were deceased. Notably, several of the figures are reinterpreted in the following chapter. Of the otherworld figures, three are turtles, eleven are miscellaneous otherworld creatures (including death heads and ball players), and the remaining nine were deities. The deities include Chaak, lightning, God N, and the Maize deity.

These monuments can be further categorized as quatrefoil frames with only one figure per frame or as frames with more than one figure. The second most common iconographic symbol inside quatrefoils were glyphs, present in 65 % of the frames. The majority of these have figures and glyphs; however, 14 of the monuments have only glyphs inside. The rest of the monuments contain two or more glyphs, often in block form, inside the frame. Interestingly, Caracol has the majority of glyphs in quatrefoil frames in the form of the Giant Ahau Altars.

4.2.3.2 Personal Adornment

Of the total monuments, 23 (32 %) had quatrefoils on some aspect of personal adornment. All aspects of dress, including clothing and associated objects that form the entire

costume worn by an individual, are included in the category of personal adornment. Mirroring the entire database, the majorities were complete and curvilinear (Table 4). However, all were either stela or wall panels located in plazas, platform, and the exteriors of superstructures. Again, percentage differences between the entire database and only personal adornment quatrefoils for iconographic associations demonstrate significant variability between the two. The most significant change is in the earth associations, which drop to zero for personal adornment quatrefoils. Looking at the distributions, single figures within quatrefoils have a significantly higher chance of being otherworldly, whereas multiple figures within a quatrefoil frame are more likely to be portraits of living rulers or elites.

Table 4 Table showing the number of figures in quatrefoils

CATEGORY	TOTAL	SINGLE FIGURE	MULTIPLE FIGURES
RULER/ELITE	13	3	10
CAPTIVE	2	1	1
DECEASED	8	7	1
UNKNOWN PORTRAIT	7	3	4
DIETY	9	9	0
OTHERWORLD	11	6	5
TURTLE	3	3	0
TOTAL	53	32	21

The second most common iconographic symbol inside quatrefoils were glyphs, present in 65 % of the frames. The majority of these have figures and glyphs; however, 14 of the monuments have only glyphs inside. The rest of the monuments contain two or more glyphs, often in block form, inside the frame. Interestingly, Caracol has the majority of glyphs in quatrefoil frames in the form of the Giant Ahau Altars.

Of the total monuments, 23 (32 %) had quatrefoils on some aspect of personal adornment. All aspects of dress, including clothing and associated objects that form the entire

costume worn by an individual, are included in the category of personal adornment. Mirroring the entire database, the majorities were complete and curvilinear (Table 5). However, all were either stela or wall panels located in plazas, platforms, and the exteriors of superstructures. Again, percentage differences between the entire database and only personal adornment quatrefoils for iconographic associations demonstrate significant variability between the two. The most significant change is in the earth associations which drop to zero for personal adornment quatrefoils.

Table 5 Table showing the percentage change in iconographic associations for personal adornment quatrefoils

	ENTIRE DATABSE	P. ADORNMENT	PERCENT CHANGE
RULERSHIP	85	100	17.6
OTHERWORLD	46	17	-63.0
EARTH	28	0	-100.0
TRANSITION	29	9	-69.0
SACRIFICE	22	35	59.1

When quatrefoils appeared on different parts of costumes or on separate people depicted on a single monument, they were counted separately. The total the number of examples is 24. Interestingly, almost all (77 %) of these quatrefoils were depicted incised with crossed bands (also known as the mat motif). The quatrefoils appear on several different parts of personal adornment, including robes (25 %), belts or sashes (25 %), footwear (39 %), shields (4 %), and staffs (17 %). The question of who able to wear the quatrefoils and why needs closer examination. Consequently, in the following section I assess each monument by site and individually, paying close attention to dynastic histories. It is important to note that relying on epigraphic dynastic sequences is only part of the picture. The use of both of archaeology and

epigraphy, which do not always complement each other, nonetheless produce the most accurate reconstructions of site histories.

There was only one example from Bonampak with quatrefoil adornments. Stela 2 depicts Ruler Chaan-Muan with his wife and his mother, positioned respectfully behind and in front of him, each holding blood-letting paraphernalia (Figure 25). His wife is depicted wearing an elaborate robe with quatrefoils marked with crossed-bands. Interestingly, this robe is very similar to those at Yaxchilan and Piedras Negras; however, careful consideration of the text reveals she was named as being from Yaxchilan. Given the power struggle between Bonampak and Yaxchilan, with the latter often having the upper hand, the marriage of a Bonampak lord to a Yaxchilan noble delineates a strong connection during this period (Mathews 1978).

There are five stelae from Piedras Negras that depict a figure adorned with quatrefoils. Chronologically, the first quatrefoils appear with Ruler 2 on Stela 35 (Figure 26). On this stela, Ruler 2 is dressed as Teotihuacan warrior with the quatrefoils incised with crossed bands and cross-hatching appearing on the belt/sash. Ruler 2 is generally assumed to be the son of Ruler 1; however his parentage statement is unreadable. There may be questions of legitimacy concerning his right to rule (Clancy 2009:42).

The next time the quatrefoil appears as part of the costume is during the reign of Ruler 3. Three of his stelae have figures adorned with quatrefoils. Ruler 3 erected visually different monuments from previous rulers at Piedras Negras, publically stressing the importance of his wife and daughter. On Stela 1 (Figure 27) Lady K'atun is depicted holding a sheathed blood letter, a theme to appear on several more of the monuments with personal adornment quatrefoils. Elaborate quatrefoils decorate her robe. On Stela 3 (Figure 28) she is seated on an elaborately

carved throne next to her child. The throne states that the location of the event is in the “Flower of the Black Earth Place” (Clancy 20089:89) denoting an underworld scene. The throne also depicts a potential vision serpent, suggesting a connection to ancestor recall. Again, Lady K’atun is depicted wearing an elaborate robe adorned with quatrefoils; however, on this stela her headdress is decorated with a sheathed blood-letter. Stela 8 erected under Ruler 3 also depicts a figure adorned with quatrefoils (Figure 29). On Piedras Negras Stela 8 Ruler 3, unlike Stela 1 and 3, depicts himself with the quatrefoil adornments, appearing on his high backed sandals. Like Stela 35, Ruler 3 is dressed as Teotihuacan warrior.

There are several lines of evidence that indicates that Ruler 3’s legitimacy as ruler was questioned. He overly stressed his parentage, repeating it on more monuments at Piedras Negras than any other ruler. He used his wife on public monuments to support his rule. He broke from the previous rulers, specifically in terms of how images were depicted on monuments. Most importantly, Clancy (2009:111) believes that the succeeding rulers chose to not bury him in the usual mortuary temple with a panel commemorating his life and purposefully omitted references to his life and rule from all the following monuments. Nonetheless, Piedras Negras flourished under his reign, as indicated by his numerous elaborately carved monuments.

The final monument from Piedras Negras that had quatrefoil adornments was Stela 11 (Figure 30). On this stela quatrefoils adorn the belt/sash of Ruler 4 and also appear on one of the surrounding figures. Like the other rulers, the parentage of Ruler 4 is not shown. He makes no parentage statements and purposefully breaks with the tradition of Ruler 3, instead aligning himself with the founders of the Piedras Negras dynasty (Clancy 2009:133). On Stela 11, Ruler 4 depicts himself seated in a niche, originally painted a dark red. On the belt/sash are several

quatrefoils, depicted with cross bands. Interestingly, of the figures that appear on the side of the stela, one of the figures is also adorned with quatrefoils on both the sash and footwear. The identity of these side figures, however, is debatable. Clancy (2009) suggests several possibilities as to their identity, none of which necessarily excludes the other. First, it is possible that they were transformers, such as shamans. Second, they may have been the same figure or several figures representing different stages in life. Third, since they are dressed elaborately with one wearing jade they may have been of elite status—even rulers of a subsidiary site. The monument has a clear connection, however, to sacrifice. In the bottom register appears a sacrificed individual, located in an underworld/earth setting with bloody footprints connecting the ruler to the body.

There were six stela from Naranjo that have quatrefoil adornments, all with incised crossed-bands. Chronologically, the first appearance of the quatrefoil is on the sandals of the figures on Stela 24 (Figure 31) and 29 (Figure 32). Both Stelae 24 and 29 were erected under Lady Six Sky. While Stela 29 is very badly eroded, on Stela 24 Lady Six Sky is depicted wearing a sheathed-blood letter in her headdress and with quatrefoils adorning her high backed sandals. Furthermore, on both stela, she “tramples” a prisoner depicted below (Martin and Grube 2008:73). Her parentage statements indicate she was from Dos Pilas and not native to Naranjo. It has been argued that arrival of a royal figure from another site is an indication of “foundation or re-foundation” of a dynastic lineage (Martin and Grube 2008:74). Lady Six Sky, then, would have had to establish her legitimacy as a ruler and as a woman, having no previous connections to the dynastic lineage at the site.

The successor of Lady Six Sky also used quatrefoil adornments. Stela 21 (Figure 33) and 40 (Figure 34) both depict K'ahk'Tiliw Chan, who acceded to the throne at the mere age of five. Quatrefoils with crossed-bands appear on the high backed sandals on both stelae. Unfortunately, Stela 40 has a significant portion missing, rendering it impossible to determine if quatrefoils appear anywhere else. On Stela 21, quatrefoils also appear on the sash and the shield of the ruler. On this monument the ruler is dressed as a warrior, perhaps a Teotihuacan warrior as suggested by the goggle eyes. K'ahk'Tiliw Chan was firmly connected to Lady Six Sky, most likely as her son. K'ahk'Tiliw Chan was known for his military campaigns, as reflected in his collection of monuments. Nonetheless, if he was the son of Lady Six Sky, his right to ruler was not firmly established (Martin and Grube 2008:80).

Finally, Stelae 6 (Figure 35) and 13 (Figure 36), erected under Smoking Batab who ruled several generations later, also depict quatrefoils with crossed-bands on personal adornment. On both stelae, Smoking Batab is depicted dressed in ritual wear with a quatrefoil adorning his high backed sandals. Unlike the previous rulers, Smoking Batab's parentage statements indicate he was in line for the throne; however his rule was not without problems. Usually a ruler erects monuments at the start of their reign; this was not the case for Smoking Batab. There are two plausible explanations: either Smoking Batab's early monuments were destroyed in a warfare event (Martin and Grube 2008:80) or he extended his rule back in time to account for a period of disruption in Naranjo's dynastic history. Further confusion arises when one considers the fact that he uses two very different names, Smoking Batab and "He of Flint" (Martin and Grube 2008:81). Therefore, it can be suggested that while his parentage legitimized his rule, something happened early in his reign when Naranjo was in dynastic turmoil.

There are three monuments from Palenque that depict figures wearing quatrefoil adornments. Stucco Figure 2 was erected under K'inich Janaab Pakal I (Figure 37). Stucco Figure 2, located in the tomb in the Temple of the Inscriptions, was part of nine life size figures that adorn the walls of the crypt. This figure, elaborately dressed in a jaguar pelt and jade beads, wears a single full quatrefoil on the sash. This quatrefoil is one of the two without visible crossed-bands, with the other example also from Palenque. This figure has been identified as a member of the "royal guard" (Robertson 1983:78). Pakal, while a prominent ruler, ascended to the throne at a time of instability and did not have direct linkage to the previous rulers from the site. Emphasizing his right to rule and creating a foundation for the future rulers was an important part of his public artworks (Martin and Grube 2008:161-162).

Next, the Tablet of the Slaves, erected under K'inich Ahkal Mo' Nahb III, depicts three figures seated on benches composed of figures (Figure 38). The two side figures were otherworldly and were depicted offering signs of rulership to the central figure. While the text is concerned with events relating to a lesser sajal named Chak Sutz', the central figure depicted in the ruler, K'inich Ahkal Mo' Nahb. The central figure wears a quatrefoil with crossed-bands on the sash tied around his body. K'inich Ahkal Mo' Nahb III, who ruled from AD 721-736, was not directly in line. In addition, his early reign is silent, either attributable to the earlier domination of the site by Tonina, or relating to his difficulties of consolidating power (Stuart and Stuart 2008). Furthermore, his reign seems to have been unconventional with power shared between himself and a military commander (Martin and Grube 2008:172).

Finally, The Creation Stone depicts quatrefoil adornments in the body or robe of the figure seated in the right cartouche (Figure 39). The figure is commonly identified as Chaak.

The monument was erected under K'inich K'uk' Bahlam II who ruled from AD 764-783. While his heritage denoted he was in line for the throne, he was the last major ruler at Palenque, ruling at a time when the kingdom appeared to be losing momentum and status (Martin and Grube 2008:174). This monument, however, is an outlier since the quatrefoils appear on the body and not on articles of clothing or ritual wears and the figure is a deity and not portrait of an individual.

Yaxchilan had seven monuments with quatrefoils depicted on personal adornment regalia. With the exception of one that is in very bad condition due to fire and breakage, all of the monuments from Yaxchilan with quatrefoils depict rituals related to blood-letting or the flap-staff event. Chronologically, the first ruler to depict a quatrefoil in personal adornment occurred on lintels 24 (Figure 40), 25 (Figure 41), and 46 (Figure 42) erected during the reign of Itzamnaaj Bahlam III who ruled from AD 681 to 742. Two of these monuments are concerned with his principle wife, who is depicted as conducting or having just conducted a blood-letting act that consisted of pulling of a thorn laden rope through her tongue. On Lintel 24, Shield Jaguar the Great is overseeing the act; he is dressed with quatrefoil adornments that appear on his sash. On Lintel 25, the wife is the main actor, having just preformed the ritual and successfully conjured a vision serpent. Quatrefoils adorn her robe, which is very similar to the earlier robes worn by Lady Six Sky at Piedras Negras. Finally, Lintel 46 probably depicts the ruler himself in high backed sandals adorned with quatrefoils (Martin and Grube 2008:123). The monuments erected during his reign were all done towards the end. Before this, there is a period of "missing history," probably due to the control of the site by the neighboring polity of Piedras Negras.

Quatrefoils appear on Stela 11 (Figure 43) and Lintels 9 (Figure 44), 33 (Figure 45), and 50 (Figure 46), that were erected under Bird Jaguar IV, who ruled from AD 752 to 768. Born to a lesser wife of the previous ruler, and only installing himself as ruler at around 43 years of age, his legitimacy to rule was severely questioned. Thus, Bird Jaguar went to great lengths to establish his right to the throne (Martin and Grube 2008:128). It has also been suggested that his supposed heritage is false, leaving him with no actual claim to the throne. On all of these monuments, Bird Jaguar depicts himself holding a flap-staff. The flap-staff has been interpreted as the depiction of a wood staff with cloth attached to a series of carved openings (Grube 1992:206). The quatrefoils on the staff are vertically halved, conjoining to form a full quatrefoil. The difference between the quatrefoils on the staff and those connected to it is readily visible; the incised quatrefoils have crossed bands and are curvilinear whereas the outside ones are rectilinear and missing the cross-bands. Likely, this illustrated that the quatrefoils were complete on the staff, but only partially visible in the side rendering. Bird Jaguar placed emphasis on this ritual. On Lintel 9, he depicts himself exchanging flap-staffs with his “brother-in-law Great Skull,” who was a *sajal* for a lesser polity (Grube 1992:132). Stela 11 depicts Bird Jaguar conducting a flap-staff ritual with his dead father Shield Jaguar I (Bardsley 1994:4). While this event likely did not take place, it serves as a public way to legitimize his rule.

The last monument from Yaxchilan with quatrefoil adornments is Lintel 14 (Figure 47), erected by Shield Jaguar III who ruled from AD 769 to 800. On this monument, the left figure is adorned with quatrefoils with incised crossed-bands appearing on the robe. This figure holds a blood-letting instrument and bowl. The figure wearing the robe adorned with quatrefoils appears to be a woman. The legitimacy of Bird Jaguar’s right to rule does not appear to be questioned.

However, Yaxchilan appears to have been in decline while Bird Jaguar continued to emphasize his control of the polity (Marti and Grube 2008:137).

Finally, the two remaining figures adorned with quatrefoils were depicted on Xultun Stela 24 (Figure 48) and Tikal Lintel 2 (Figure 53). Stela 24 from Xultun, dating to the Late Classic Period, depicts the ruler dressed in ritual costume holding a baby jaguar in his palm. The quatrefoils on this stela appear to be part of the leg wear or the bottom section of the robe. Unfortunately, it is difficult to tell if they have crossed-bands. As there is little information published on Xultun, what can be concluded is that the site was extensively occupied during the Terminal Classic. A baby jaguar may have been a symbol reflecting the new power relationships in the Terminal Classic Period (Chase 1985:110).

At Tikal, Yik'in Chan K'awiil is believed to be responsible for Lintel 2 in Temple 4. During his rule, Tikal flourished despite having lost a major war event not long before his father took over control of the city (Martin and Grube 2008:48). The lintel depicts a defeat over Naranjo with the Tikal ruler depicted as seated "in place of his vanquished rival" (Martin and Grube 208:79). It is interesting that the one example from Tikal is linked to Naranjo, another site with numerous examples of quatrefoil adornments.

In summary, personal adornment quatrefoils all dated to the Late Classic Period, first appearing in the late AD 600's and disappearing by AD 800. Of the figures, the overwhelming majority were elite or royal, comprising 96%. Of these, 54% were identifiable as rulers, 29 % were elite, 13 % were the wives of rulers, and the one remaining figure is identified as a deity. The rulers were depicted in either ritual or warrior regalia. Interestingly, when quatrefoils appear on robes, they are always worn by female figures. While the map indicates that the

quatrefoils were widespread throughout the lowlands, the closer examination revealed several patterns. Using GIS to generate a 30-mile buffer around each site, two groupings appear (Figure 16). The majority of examples were from Yaxchilan, Piedras Negras, and Naranjo (n=18)-where the earliest examples occurred. The quatrefoil adornments do have a specific geographic distribution, especially when one considers that the first quatrefoils at Naranjo are associated with a female from Dos Pilas which was located near Yaxchilan and Piedras Negras, the Bonampak example was on the robe of a female figure from Yaxchilan, and the Tikal and Xultun example, both sites located near Naranjo, appear towards the end of the Classic Period. Furthermore, the Tikal example is on a ruler who defeated Naranjo. Consequently, the origin of the symbol on adornments may have been from the Usumacinta Basin.

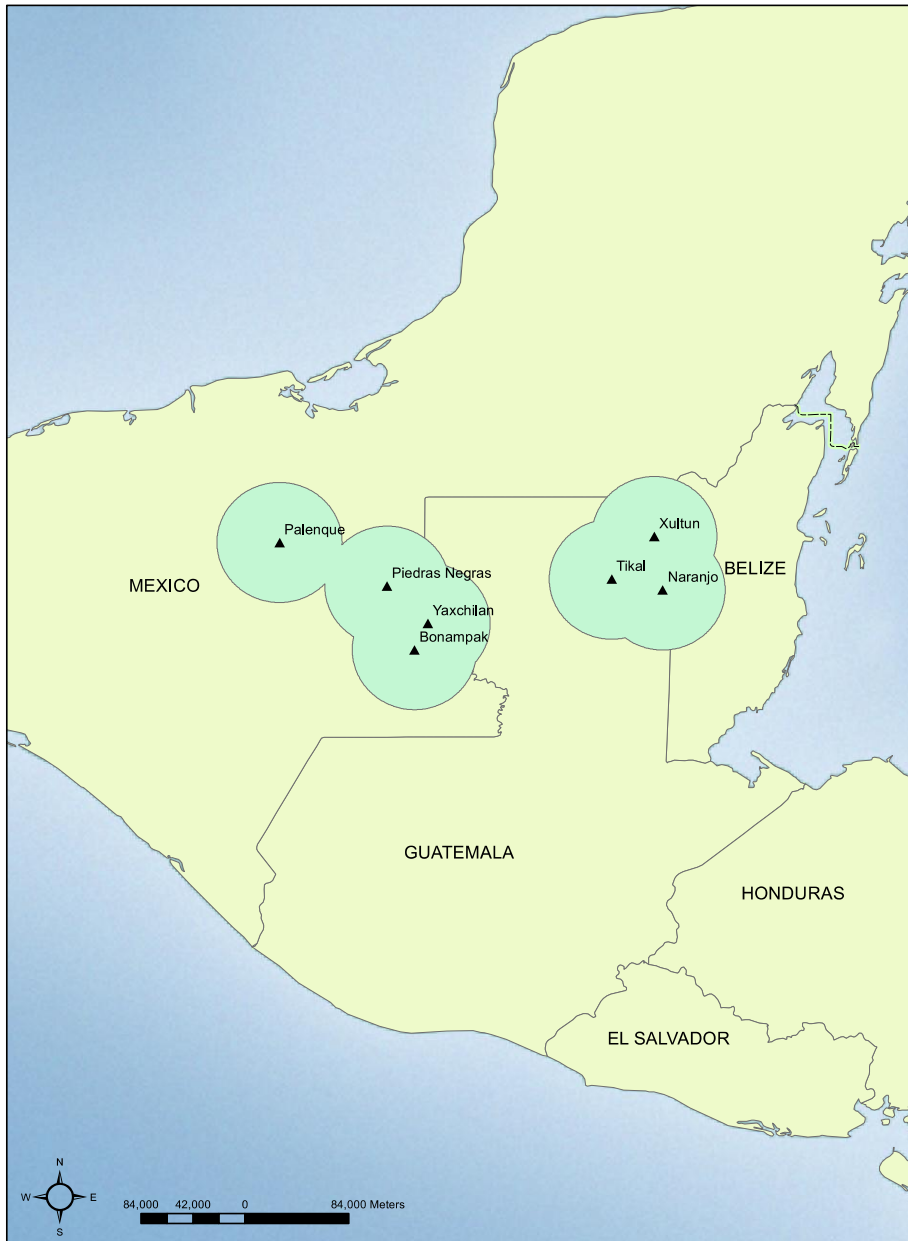


Figure 16 Map showing a 30-mile Buffer around sites with personal adornment quatrefoils

Site locations courtesy of Dr. Clifford T. Brown and Dr. Walter R. T. Witschey, © Electronic Atlas of Ancient Maya Sites.

4.2.3.3 Elements

Seven % of the database is comprised of quatrefoils classified as elements. These quatrefoils were only from Caracol, Copan, and Tonina, all dating to the Late Classic Period. With the exception of one, all of these monuments depict a ruler standing on a quatrefoil that is attached to the forehead of a monster that is marked with tun signs, suggesting a connection between quatrefoil elements and the earth. When comparing the iconographic associations among quatrefoils that functioned as elements with the entire database, earth iconography significantly increases by almost 200 % (Table 6). However, the rest of the iconographic associations decrease in frequency slightly.

Table 6 Table showing the percentage change in iconographic associations for element quatrefoils

	ENTIRE DATABSE	ELEMENTS	PERCENT CHANGE
RULERSHIP	85	80	-5.9
OTHERWORLD	46	40	-13.0
EARTH	28	80	185.7
TRANSITION	29	40	37.9
SACRIFICE	22	20	-9.1

4.2 SPATIAL AND TEMPORAL DISTRIBUTIONS

By correlating the quatrefoils used through time and their geographic spread, the history of the symbol and potential meanings can be inferred (Clancy 2009:6). Quatrefoils occur at a total of 15 different sites within the Southern Maya Lowlands. Geographically, the majority of sites are within close range of each other, indicating a high probability of interaction. While all of the examples in the database are from the Classic Period, the majority examples (81 %) were from the Late Classic Period, 13 % were from the Early Classic Period, the remaining six percent were of Terminal Classic date (Figure 17).

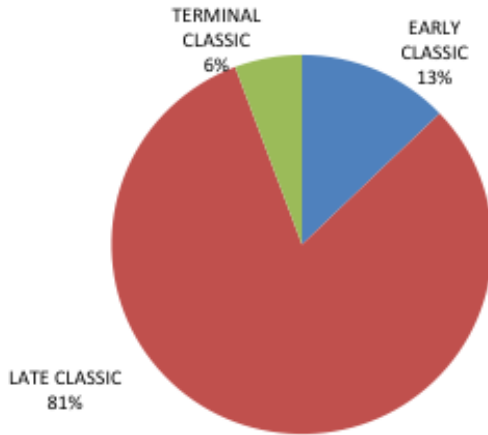


Figure 17 Pie chart showing the temporal distribution

4.2.1 Temporal Distributions

Analysis of the temporal spread according to spatial distribution reveals several patterns. First, examples from the Early Classic Period are only found at four sites, all dating to the later end of the Early Classic: Caracol, Copan, Naranjo, and Tres Islas (Figure 18). Interestingly, all of these sites are generally located along the western edge of the Southern Maya Lowlands. Comparing the percentages from the Early Classic to the entire Classic Period shows a significant change in all categories, with the exceptions of the iconography associated with rulership, the percentage of complete quatrefoils, and the percentage of curvilinear quatrefoils). The most significant changes were in: completeness where only complete quatrefoils were present; function where only frames were present; and, monument type and venue. All of the quatrefoils were on accessible monuments, either stelae or altars. This indicates that except for general form, the quatrefoils from the Early Classic are significantly different from the rest of the database.



Figure 18 Map of Early Classic Period sites with quatrefoils

Site locations courtesy of Dr. Clifford T. Brown and Dr. Walter R. T. Witschey, © Electronic Atlas of Ancient Maya Sites.

Table 3 Table showing the percentage change in iconographic associations between the Early Classic and Classic Periods

CATEGORY	UNIT	CLASSIC	EARLY	PERCENT CHANGE
ASSOCIATION	RULERSHIP	85	78	-8.5
	OTHERWORLD	46	22	-51.7
	EARTH	28	11	-60.3
	TRANSITION	29	11	-62.1
	SACRIFICE	22	0	-100.0
FORM	COMPLETE	80	100	25.0
	PARTIAL	20	0	-100.0
	CURVILINEAR	73	89	21.8
FUNCTION	RECTILINEAR	27	11	-59.3
	FRAME	60	100	66.7
	ELEMENT	7	0	-100.0
VENUE	PERSONAL ADORN.	26	0	-100.0
	ACCESSIBLE	50	100	100.0
MONUMENT TYPE	INTIMATE	43	0	-100.0
	STELA	33	11	-66.7
	WALL PANEL	29	0	-100.0
	BENCH	1	0	-100.0
	OTHER	3	0	-100.0
	ALTAR	34	89	161.4

The geographic spread during the Late Classic Period, when the symbol occurs in the highest frequency, was fairly diverse in distribution throughout the Southern Lowlands. Late Classic Period monuments were found at a total of 10 sites that included Bonampak, Caracol, Copan, Machaquila, Naranjo, Palenque, Piedras Negras, Quirigua, Tikal, Tonina, and Yaxchilan (Figure 19). As expected, since the majority of examples come from the Late Classic Period, the database percentages are very similar, reflecting the most diversity of any sub-temporal period (Table 8). The only significant change is a reduction in the percentage of quatrefoils that were rectilinear in form.

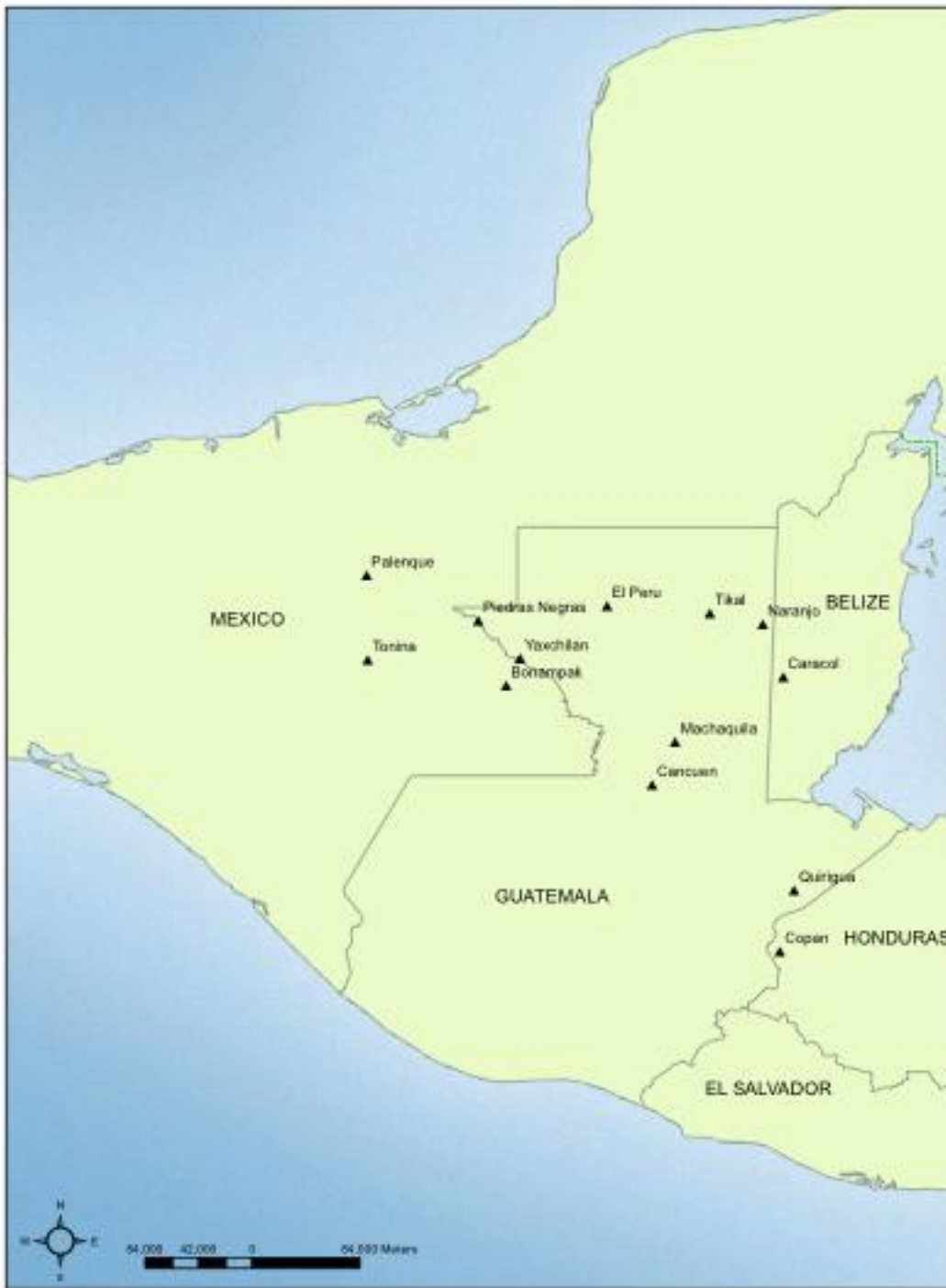


Figure 2 Map of Late Classic Period sites with quaterfoils

Site locations courtesy of Dr. Clifford T. Brown and Dr. Walter R. T. Witschey, © Electronic Atlas of Ancient Maya Sites.

Table 4 Table showing the percentage change in iconographic associations between the Late Classic and Classic Periods

CATEGORY	UNIT	CLASSIC	LATE	PERCENT CHANGE
ASSOCIATION	RULERSHIP	85	85	0.2
	OTHERWORLD	46	41	-11.4
	EARTH	28	31	12.4
	TRANSITION	29	30	2.2
	SACRIFICE	22	20	-7.4
FORM	COMPLETE	80	89	11.3
	PARTIAL	20	11	-45.0
	CURVILINEAR	73	91	24.3
	RECTILINEAR	27	9	-65.7
FUNCTION	FRAME	60	53	-12.3
	ELEMENT	7	9	25.3
	PERSONAL ADORN.	26	39	48.4
VENUE	ACCESSIBLE	50	37	-25.9
	INTIMATE	43	63	46.4
MONUMENT TYPE	STELA	33	30	-10.2
	WALL PANEL	29	37	27.7
	BENCH	1	2	85.2
	OTHER	3	4	23.5
	ALTAR	34	28	-18.3

Caracol and Machaquila were the only sites with monuments from the Terminal Classic Period (Table 9), however the wall panels from Copan Temple 18 verge on the Terminal Classic dating to AD 790-800. These sites are on the central and western edge of the Southern Lowlands and are in fairly close proximity to each other (Figure 20). During the Terminal Classic, many sites in the Southern Lowlands were being “abandoned;” however, the continued use during the end of the Classic Period shows that the symbol was not affected by the “collapse.” Interestingly, Caracol is the only site with quatrefoils from the Early, Late, and Terminal Classic Periods. Like the Early Classic, the Terminal Classic Period quatrefoils are significantly different when compared to the entire database. Interestingly, the frequency of iconography related rulership, earth, and sacrifice stay relatively the same with only otherworld and transition iconography increasing significantly. The percentages of completeness of the quatrefoils also

changes significantly during this period, with partial quatrefoils comprising the overwhelming majority. Only stelae and altars, both accessible venues, were accounted for in the Terminal Classic. Furthermore, all of the quatrefoils functioned as frames.

Table 9 Table showing the percentage change in iconographic associations between the Terminal Classic and Classic Periods

CATEGORY	UNIT	CLASSIC	TERMINAL	PERCENT CHANGE
ASSOCIATION	RULERSHIP	85	100	17.6
	OTHERWORLD	46	75	63.0
	EARTH	28	25	-10.7
	TRANSITION	29	75	158.6
	SACRIFICE	22	25	13.6
FORM	COMPLETE	80	25	-68.8
	PARTIAL	20	75	275.0
	CURVILINEAR	73	100	37.0
	RECTILINEAR	27	0	-100.0
FUNCTION	FRAME	60	100	66.7
	ELEMENT	7	0	-100.0
	PERSONAL ADORN.	26	0	-100.0
VENUE	ACCESSIBLE	50	100	100.0
	INTIMATE	43	0	-100.0
MONUMENT TYPE	STELA	33	75	127.3
	WALL PANEL	29	0	-100.0
	BENCH	1	0	-100.0
	OTHER	3	0	-100.0
	ALTAR	34	25	-26.5



Figure 20 Map of Terminal Classic sites with quatrefoils

Site locations courtesy of Dr. Clifford T. Brown and Dr. Walter R. T. Witschey, © Electronic Atlas of Ancient Maya Sites.

4.2.2 Spatial Distributions

The geographic distribution also has potential to provide pertinent information about inter-site patterning. First, analyzing sites according to large geographic sections required lumping sites into one of four general zones: the western edge of the Southern Lowlands encompassing Palenque, Bonampak, Yaxchilan, Piedras Negras, and Tonina, the northern and eastern edges of the Southern Lowlands encompassing Xultun, El Peru, Tikal, Naranjo, and Caracol, the southern edge of the Southern Lowlands encompassing Machaquila, Tres Islas, and Cancuen, and the southeastern edge of the Southern Lowlands encompassing Quirigua and Copan. These groupings were established using the buffer feature in GIS. Accordingly, setting a 25 mile buffer to determine which sites were in close proximity to each other revealed four general groupings (Figure 21). In order to assess the spatial distributions, the sites were grouped together according to general location and then percentages for the quatrefoil characteristics were entered into a table for each site (Table 10).

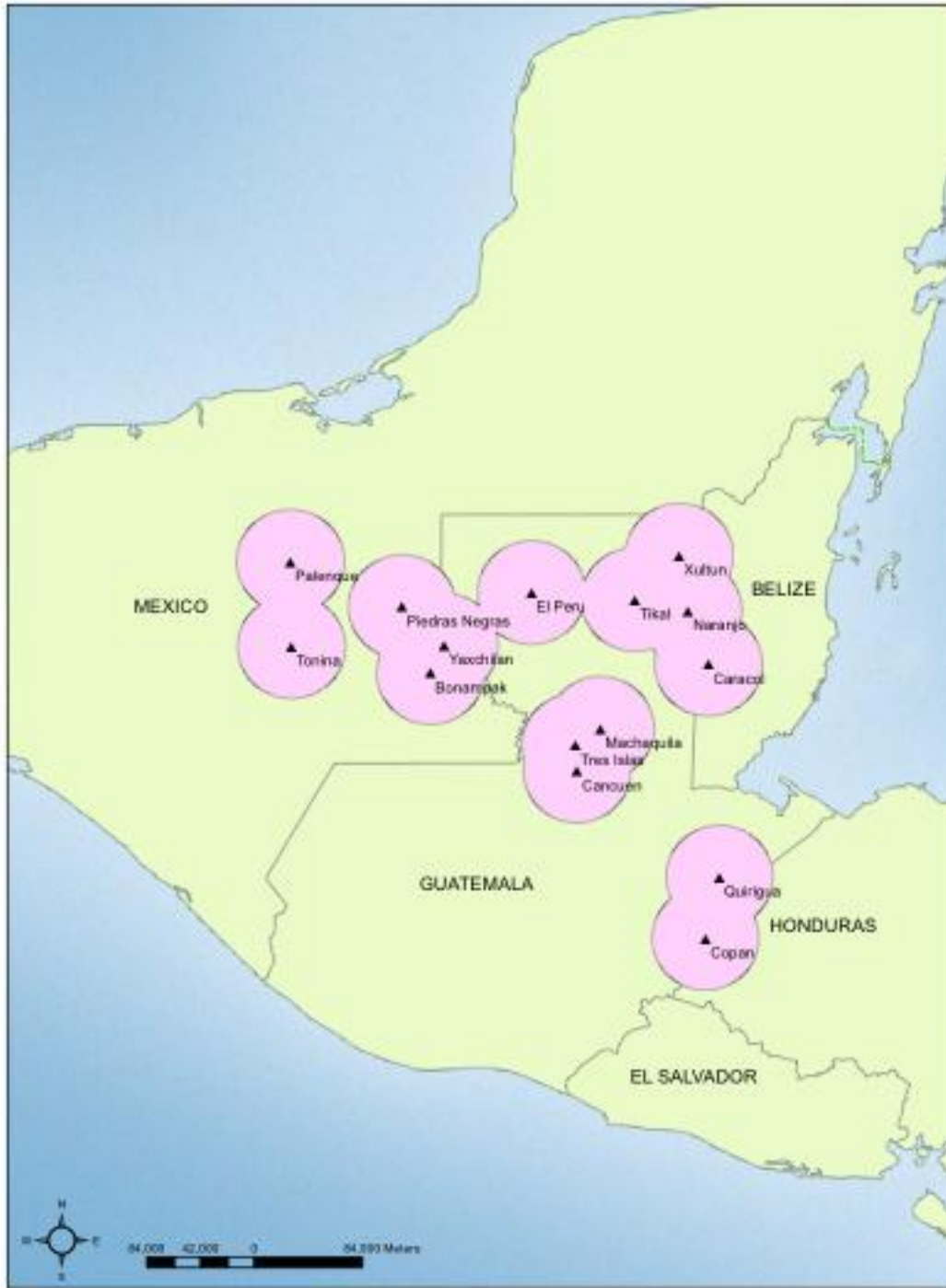


Figure 21 Map of Maya sites with a 25-mile buffer

Site locations courtesy of Dr. Clifford T. Brown and Dr. Walter R. T. Witschey, © Electronic Atlas of Ancient Maya Sites.

Considering the western monuments, several patterns emerge. These monuments only date to the Late Classic Period. Since there are five sites, the majority for each category is determined when three out of the five have a percentage of 50. For the western sites, the majority of quatrefoils were complete and curvilinear and portray iconography related to rulership. This mirrors the frequencies in the entire database. However, there are no apparent majorities for function, monument type, or venue. Interestingly, more of these sites have sacrifice iconography than the other three groupings.

Examining the sites in the northern and eastern parts of the Southern Lowlands, monuments date to the Early, Late, and Terminal Classic Periods. Like the entire database, the majority of quatrefoils were complete and curvilinear frames. However, there is a significant increase in the percentage of accessible monuments, in this case of altars. The only consistent iconographic association is that of rulership, comprising the highest frequency of the samples.

In the southern edge of the Southern Lowlands, the monuments date to the Early, Late, and Terminal Classic. The monuments from these sites mirror from the frequencies seen in the entire database, with the majority being complete frames associated with rulership, otherworld, and transition iconography; however, they diverge in several categories: the majority were rectilinear, located on stelae, with 100 % in accessible locales.

Finally, in the southeastern edge of the Southern Lowlands, monuments date to the Early and Late Classic; however, several of the Late Classic monuments may be Terminal Classic Period in date. These two sites were the furthest from the others and their environments are transitional between the lowlands and highlands. Archaeology has demonstrated that they had significant interaction with sites throughout the Maya region and into Mexico (Chase and Chase

2011). It is also noteworthy that Quirigua and Copan's histories are intertwined, with the Quirigua being subservient to Copan for much of its history (Sharer and Traxler 2006:352). These two sites only differ from the entire database in terms of iconographic associations; the amount of earth iconography significantly increases at Copan and Quirigua.

Table 10 Table showing the general geographic distribution frequencies

CATEGORY	CHARACTERISTICS	ENTIRE DATABASE	TRES ISLAS	MACHAQUILA	CANCUEN	NARANJO	CARACOL	XULTUN	TIKAL	EL PERU	QUIRIGUA	COPAN	PALENQUE	PIEDRAS NEGRAS	TONINA	BONAMPAK	YAXCHILAN
FORM	COMPLETE	81	100	25	100	100	100	100	75	100	67	73	89	75	0	50	87.5
	PARTIAL	19	0	75	0	0	0	0	25	0	33	27	11	25	100	50	12.5
	RECTILINEAR	23	100	0	100	0	0	100	0	100	33	27	33	25	100	50	50
	CURVILINEAR	77	0	100	0	100	100	0	100	0	67	73	67	75	0	50	50
FUNCTION	FRAME	61	100	100	100	14	82	0	75	100	100	82	67	37	0	50	0
	ELEMENT	14	0	0	0	0	18	0	0	0	0	18	0	0	100	0	0
	ADORNMENT	32	0	0	0	86	0	100	25	0	0	0	33	63	0	50	100
MONUMENT	ALTAR	35	0	0	0	14	82	0	67	100	100	55	0	0	100	0	0
TYPE	WALL PANEL	29	0	0	100	0	0	0	33	0	0	36	78	0	0	0	87.5
	STELA	31	100	100	0	86	18	100	0	0	0	0	0	100	0	100	12.5
	BENCH	2	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0
	OTHER	3	0	0	0	0	0	0	0	0	0	9	11	0	0	0	0
VENUE	ACCESSIBLE	53	100	100	100	86	100	100	67	100	100	55	0	100	100	X	12.5
	INTIMATE	43	0	0	0	14	0	0	33	0	0	36	89	0	0	X	87.5
ASSOCIATIONS	RULERSHIP	85	0	100	100	86	100	100	33	100	67	91	67	100	0	100	100
	OTHERWORLD	46	0	75	100	14	0	0	67	0	33	82	89	33	0	50	0
	EARTH	28	100	25	0	0	27	0	33	100	67	55	33	0	0	50	0
	TRANSITION	29	0	75	100	14	9	0	33	100	33	18	67	0	100	50	25
	SACRIFICE	22	0	0	100	0	9	100	33	0	0	0	0	83	100	50	37.5

4.3 The Preclassic Period

The antecedents of the quatrefoil found during the Preclassic Period provide the foundations for latter interpretations. Therefore, establishing whether these two Periods can be considered similar enough to be from the sample is important for establishing the validity of the previous interpretations. The likeness of the samples was compared using a table with relevant percentages of frequencies for the relevant categories within each dataset. Venue and monument type were excluded because their variability does not necessarily reflect a choice, but may rather pertain to technological advances in addition to overall changes in societal structure. Furthermore, personal adornment quatrefoils were eliminated because relevant examples from the Preclassic Period were not previously found. The corpus of scholarship relating to Preclassic Period quatrefoils do not refer to the specific usage of this symbol.

As before, a fifty % increase or decrease in percentages is considered statistically significant (Table 11). Fifty % was arbitrarily chosen as the significance level because a change greater than this percentage denotes that the two samples varied by an increase or decrease of equal to, or more than, half. Of the 11 units within 3 categories, 6 had a statically significant change in percentages, 4 decreasing and two increasing. For iconographic associations, each of the categories changed significantly. The form had similar percentages for complete, curvilinear, and rectilinear; however, the number of partial quatrefoils increased significantly. In addition, while the number of frames increased by almost 50 % and the number of elements decreased, neither did significantly. The assessment of the data reveals a continuous stylistic preference for the depiction of the quatrefoil that did not change with time. However, the associations, which

are important for determining meaning, did change significantly. This indicates a significant probability that meaning changed between the Preclassic and Classic Periods.

Table 11 Table showing the percentage change in iconographic associations between the Preclassic and Classic Periods

CATEGORY	UNIT	ENTIRE DATABSE	PRECLASSIC	PERCENT CHANGE
ASSOCIATION	RULERSHIP	85	37.5	-55.9
	OTHERWORLD	46	12.5	-72.8
	EARTH	28	75	167.9
	TRANSITION	29	12.5	-56.9
	SACRIFICE	22	0	-100.0
FORM	COMPLETE	80	62.5	-21.9
	PARTIAL	20	37.5	87.5
	CURVILINEAR	73	75	2.7
	RECTILINEAR	27	25	-7.4
FUNCTION	FRAME	60	90	50.0
	ELEMENT	7	10	42.9

4.4 Summary

In sum, this chapter demonstrated the significant diversity of the quatrefoil in all categories of analysis. Analysis suggests that meaning should be determined through the interpretation of the monument within the entire context, taking into account the temporal and geographic distributions as well as the site histories. In the following chapter I consider the broader social and contextual patterns in order to interpret meaning.

CHAPTER 5: ICONOGRAPHIC INTERPRETATIONS

5.1 Introduction

While the previous chapter demonstrated that there were several patterns within the geographic distributions, it can nonetheless be concluded that the quatrefoil was a markedly diverse symbol indicating interpretation would be contingent upon context. This chapter demonstrates how the quatrefoil can be interpreted as a cosmogram: first, through the inherent directionality of the symbol; second, through its ability to function as a portal that combines and transcends world levels. In addition, an exploration provides the opportunity for the examination of more specific functions related to power and ideology. Finally, a re-evaluation of the symbol will demonstrate the necessity of reinterpreting the meanings of some of the monuments.

5.2 The Quatrefoil Cosmogram

Attested to by its consistent and enduring use, the quatrefoil was a visual illustration of how the people inhabiting Mesoamerica conceptualized space. Use of the quatrefoil to express the spatial ordering of the world thereby renders the symbol a cosmogram. Cosmograms function as a mechanism for “centering the world” in order to “re-creat[e] spatial order that focuses the spiritual forces of the supernatural within the material forms of the human world, rendering these forces accessible to human need” (Freidel, et al. 2008:131). For the Maya, the importance of this concept is denoted by the large scale ordering of architectural patterns, as well the smaller scale ordering of “caches, altars, buildings, tombs, milpas, and plazuelas” (Mathews and Garber 2004:49). The definition by Hendon and Joyce (2004:326) of a cosmogram as “a representation of the entire universe through symbolic shorthand or artistic metaphor” indicates

that cosmograms could also be depicted in art and iconography. While critiques of the interpretations of cosmograms do exist, especially when considering the empirical methods for determining site patterning as an architectural cosmogram (Smith 2005), cosmograms are nonetheless clearly evident at multiple levels of Maya society.

For the Maya, the quatrefoil embodied both the four-part horizontal directionality and three-part layering of the universe. In addition, as denoted by its very form, the middle of the symbol was a visual manifestation of the cosmic center, thereby symbolizing its ability to function as a portal between worlds. Each world was home to a certain set of denizens that, while often restricted spatially, could access different levels through portals. Accordingly, the quatrefoil was not only a symbolic map but also a visual expression of who could inhabit that space. Consequently, the quatrefoil was a potent symbol that compressed a complex three-dimensional visualization of the universe and rendered it in two dimensions. In their iconography the Maya configured the quatrefoil as a cosmogram to delineate its power to orient and transcend world-levels.

5.2.1 The Horizontal Quadrants of the Earth

The horizontal directionality component of the symbol is illustrated in several ways. First, the entire symbol, as denoted by its name, is fundamentally sectioned into four-parts, mirroring the quadripartite division of the universe. This segmentation was also visually illustrated on Sculpture 131 from Copan (Figure 52). This monument, while slightly eroded, depicts the profile of a seated figure positioned in each of the four lobes. Each figure is positioned around a centrally placed figure that is facing forward thereby indicating that each figure functioned as a symbol for the world directions and center.

The quatrefoil could also individually represent a world direction. Altar 4 from Tikal depicts four quatrefoils around the base of an altar, each as part of the body or jaws of an earth monster (Figure 53). From within each quatrefoil emerges God N, a symbol of rebirth (Chase and Chase 1985). According to Thompson (1950) God N was an earth deity. This deity was often depicted emerging from the carapace of a turtle or shell in Classic Maya iconography. Consequently, the depiction of four quatrefoils and the four God N's visually illustrates the directionality of the earth.

The horizontal segmentation of the word was also illustrated through the use of metaphor. While the earth was conceived as a rounded circular surface floating in water, it was also theriomorphic with the turtle functioning as a model for the earth (Taube 1988:199). The carapace of the turtle is often divided into four quarters forming a cross (Taube 1988:199). In the iconography, several monuments illustrate the quatrefoil as the carapace of the turtle, thereby illustrating the horizontal segmentation. The origin of the quatrefoil as the carapace of the turtle earth dates back to the Preclassic. Both Izapa Stela 8 (Figure 6) and Abaj Takalik Altar 48 (Figure 8) depict the quatrefoil as the carapace of a saurian creature. On Izapa Stela 8 the creature is identified as a turtle, whereas on Altar 48 from Abaj Takalik the saurian creature is identified as a crocodile (Guernsey 2006; Guernsey 2010). However, the similarity of the iconography between the two creatures suggests that they were the same. Therefore, I identify both as turtles.

During the Late Classic Period another monument appears that is significantly similar in iconography to the two Preclassic monuments. The Altar from El Peru depicts a quatrefoil as the carapace of a double-headed turtle wearing water-lily headdresses with water-lily fins emerging

from each corner (Figure 54) (Taube 1994:441). Also, during the Classic Period, Altar W' from Copan depicts a quatrefoil as the carapace of a turtle reiterated by the presence of two turtle fins emerging from the upper corners (Figure 55). Interestingly, the head of the turtle is placed within the quatrefoil and an additional two heads were depicted emerging from the left and right of the carapace, each with an associated foot below. Although less clear, Stela 10 from Machaquila may also depict the quatrefoil as the carapace of a turtle, denoted by the depiction of a turtlehead within the frame (Figure 56).

The Jambs from Temple 18 at Copan tie together the symbol's ability to orient the earth as well as individually represent the four world directions. The Northeast (Figure 57), Northwest (Figure 58), Southeast (Figure 59), and Southwest (Figure 60) jambs each individually depict a quatrefoil as part of a turtle. The Northwest and Northeast Jambs depict a partial quatrefoil on the forehead of a turtle, the Southwest jamb depicts a turtle within a half quatrefoil from which water lily fins emerge, and the Southeast Jamb depicts a full quatrefoil with four water lily fins emerging from each corner. While only the Southeast and Southwest Jambs clearly depict the quatrefoil as the carapace of a turtle, they all reaffirm the connection between the turtle, earth, and quatrefoil. The jambs, when viewed together, also function as a visual representation of the horizontal partitioning, positioning each turtle/quatrefoil at one of the four world directions.

Finally, assuming at this point that the quatrefoil could function as a model of the turtle carapace, the Caracol Ahau altars (Figures 49-56) can also be construed as representations of the "turtle-earth." However, instead of turtle iconography to illustrate the connection, this time it is implied through the connection between turtles and Ahau period endings. Taube (1988:189) cites numerous examples from Classic Period archaeology and iconography that Ahau glyphs

were often depicted on the carapace of turtles. Consequently, since the quatrefoil could be a symbol of the turtle carapace and Ahau period ending glyphs were often illustrated on turtles, the Caracol altars that depict Ahau glyphs within a quatrefoil frame may be visually depicting the quatrefoil as a symbolic turtle carapace.

5.2.1 Portals and Transition

Unlike the horizontal division of the world that could be directly depicted in the quatrefoil, the vertical layering was denoted by the symbol's transitional ability to function as a portal connecting all three world-levels. For the Maya, portals could range from "large or small" in size while "some were more symbolic than actual" (Chase and Chase 2009:225). They could be physical features within the landscape such as caves, constructions within the architecture such tombs, or could be manifested through rituals such as bloodletting. In art and iconography, portals could be illustrated as earth monsters, serpents, jaws, niches, and frames and be implied through the depiction of ritual. Naranjo Altar 1 (Figure 70) substantiates the portal interpretation by depicting the quatrefoil in the form of bone jaws, another symbol for portals. The quatrefoil was not only a portal but also a liminal space that could exist in more than one plane simultaneously. Consequently, as the nexus of the universe, the symbol was illustrated both as a pathway to all three world-levels and as an in-between locale in the iconography.

The iconography of the quatrefoil supports that it was a portal between the earth, underworld, and celestial realms. This was illustrated on several monuments through the depiction of the corresponding iconography and epigraphy. Quatrefoils could be illustrated as portals to the underworld by the presence of cross-hatching and certain glyphic markers. On Cancuen Panel 3 the quatrefoil was lined with crosshatched dots (Figure 71). Cross-hatching

also appears on the frame of the quatrefoil on Altar 10 (Figure 72) and Lintel 2 (Figure 49) from Tikal. In addition, the presence of inhabitants of the underworld within a quatrefoil delineate that it functioned as a portal to that locale. This is illustrated on the three ballcourt marks from Copan where all except one of the figures have underworld attributes such as skeletal jaws or grotesque faces (Figures 74-76).

Glyphic markers for the underworld appear on the Motmot marker from Copan that depicts the numbers 7 and 9 (common prefaces for the otherworld) under the feet of the seated figures (Figure 22). These glyphic markers for the underworld also appear on Piedras Negras Stela 3 (Figure 28) that, while not directly attached to the figure or the quatrefoil, were depicted on the pedestals of the throne upon which the two figures were seated. Naranjo Altar 1 (Figure 70) also had glyphic markers for the underworld, this time as signs for death illustrated in the center of the quatrefoil. Finally, Stela 4 (Figure 76) from Machaquila had a glyph within the partial quatrefoil frames placed under the feet of a ruler. While the glyph is generally interpreted as “ha” which means water, thereby denoting the quatrefoil was a water lily (Stone 2011:72), the glyph is clearly a hatched imix which is a sign for the underworld.

Quatrefoils that lead to the celestial realm were denoted by the presence of glyphic markers for the upper world and sky iconography. The glyph within the quatrefoil on Machaquila Stela 7 (Figure 23), again generally interpreted as sign for water lily, has celestial elements. Interestingly, while the glyph from the Stela 8 (Figure 77) from Machaquila is unreadable, Stela 4 (Figure 64) and 7 (Figure 11) clearly indicate that the portal could lead to either the upper or underworld. The surrounding iconography of the East (Figure 78) and West

(Figure 79) Sanctuary Roofs from Palenque also place the quatrefoil in a celestial realm, this time by encasing the symbol in skybands.

Quatrefoils were more generally associated with earth iconography and epigraphy indicates that a portal often existed between the human and the otherworld. The Altar from El Peru (Figure 54) names the portal as “at the heart of turtle,” indicating it was at the center of the earth (Taube 1994:441). Earth iconography appears on several monuments, including Quirigua Altars R (Figure 80) and Q (Figure 81) where vegetation sprouts from the corners of the quatrefoil (Figure 81). Stela 2 from Tres Islas (Figure 82) had earth bands and signs decorating the entire lower half. In addition, Altar W' from Copan (Figure 55), the South Jamb from the Temple of the Foliated Cross (Figure 83), and the West Jamb from the Temple of the Cross (Figure 84) at Palenque had the tun sign, which translates as “stone,” depicted as hanging from the border of the quatrefoil.

In addition to the turtle iconography discussed previously, several monuments depict the quatrefoil with another metaphor for the earth, the earth monster. Stelae 4 (Figure 50) and 6 (Figure 51) from Caracol, the NE, NW, and SE Jambs from Copan (Figures 58-61), Stela 1 from Bonampak (Figure 85) and Altar 4 from Tikal (Figure 53) all depict the symbol attached to earth monsters. These zoomorphic creatures have been interpreted as caves on the surface of the earth (Taylor 1978:5), as an iconographic representation of a living mountain (Schele and Freidel 1990:418), and as portals to the underworld (Chase and Chase 2009:225). While none of these definitions are necessarily exclusive of the others, they do indicate different meanings. Taylor (1978:2) demonstrates that these monsters can be identified by their consistent location in the bottom register of monuments and by their specific markings, including the tun or stone symbols

composed of a stepped cluster of dots, vegetation, eccentric foreheads, eyelashes, quatrefoil and partial quatrefoil motifs. These zoomorphs could symbolize entryways through various aspects, including by “swallowing the dead,” or of “gaping jaws,” or through the depiction of quatrefoils on the zoomorph (Chase and Chase 2009:225). In the iconography, earth monsters seem to have been markedly diverse and were depicted in a variety of styles, including as turtles (Chase 1991). However, the placement of the quatrefoil appears to denote that the specific function of the quatrefoil was as a portal in the earth.

A quatrefoil could also be denoted as a portal to the otherworld through the depiction of extramundane beings that were not restricted to either the upper or underworld. For example, deities appear within quatrefoils on the South Jamb from the Temple of the Foliated Cross (Figure 83) and West Jamb from the Temple of the Cross (Figure 84), and the Creation Panel from Palenque (Figure 39), as well as on Stela 1 from Bonampak (Figure 85). Furthermore, deceased figures appear within quatrefoils on the sarcophagus cover from Palenque where six faces of named portraits appear along the upper and lower borders (Figure 86) and on Stela 40 from Piedras Negras where an ancestor is depicted with a partial quatrefoil (Figure 87). Stela 40 also illustrates a general otherworld locale accessed by the ruler through means of a scattering event into the partial quatrefoil cavern below (Clancy 2009).

The quatrefoil could be rendered as transitional both through the presence of certain iconographic motifs and by the illustration of inhabitants of the otherworld in action with living individuals. First, transitional iconography such as smoke or clouds (Quirigua Monument 23 [Figure 88]) blood or water (Piedras Negras Stela 35 [Figure 26]), vision serpents (Yaxchilan Lintel 25 [Figure 41]) and umbilical cords (Palenque South [Figure 83] and West [Figure 84])

Jambs) when attached to a quatrefoil, indicate the symbol is transitional. The most prominent symbol for transition however was the water lily that could live above and below the water simultaneously. Water lilies emerge from the corners of quatrefoils on Panel 3 from Cancuen (Figure 71), Pier A (Figure 89) and the East (Figure 78) and West (Figure 79) Sanctuary Roofs from Palenque, and Monument 135 from Tonina (Figure 90).

Two monuments illustrate a living individual in action with a deceased or otherworldly actor. The Motmot Marker from Copan (Figure 22) depicts the founder of the Copan dynasty, Yax K'uk Mo, situated across from his successor within a quatrefoil frame. However, this monument was commissioned by Ruler 2 who likely erected this monument after Yax K'uk Mo's death. Similarly, the Central Ballcourt Marker from Copan (Figure 74) depicts the current ruler in action with a figure from the otherworld within a quatrefoil frame, thus illustrating the quatrefoil's ability to bridge the gap between the living and the dead.

5.3 Royal Power

The quatrefoil, as a cosmogram that mediated between both the horizontal and vertical partitioning of the universe, was not only a symbolic map of how the Maya conceptualized space but also indicated who could inhabit that space. The intentional placement of figures within, in association with, or directly wearing quatrefoils associates the figure with the power of the symbol. However, while the quatrefoil embodies complex ideas about Maya worldview, it is how these ideas were expressed that is directly indicative of its meaning. Consequently, understanding how the symbol was appropriated, and for what purpose, by the actors in the images has the potential to transform the quatrefoil beyond that of a cosmogram and into an

ideological symbol. However, this requires evaluating who was placed within or with this potent symbol and, subsequently, what they were doing once they were there.

5.3.1 The Figures

Chapter 4 illustrated that there was a wide variety of figures including portraits of actual individuals both living and deceased, as well as otherworld denizens such as deities and monsters depicted in, with, or wearing quatrefoils. However, when considering the function of the quatrefoil separately, several patterns emerge. First, the figures depicted wearing quatrefoils were almost exclusively rulers or the wives of rulers, with the exception of one elite holding a quatrefoil flapstaff at Yaxchilan, one deity with quatrefoil adornments, and a royal guard figure from Palenque. In addition, the overwhelming majority of figures illustrated with the quatrefoil as an element were rulers. On these monuments, the quatrefoil was almost always depicted below the feet of a standing ruler, as shown on Machaquila Stelae 4 (Figure 76), 7 (Figure 23), 8 (Figure 77), and 10 (Figure 56), Caracol Stelae 4 (Figure 50) and 6 (Figure 51), and the Copan Jambs from Temple 18 (Figures 58-61). The exceptions, Tonina Monument 135 (Figure 90) and Quirigua Monument 23 (Figure 88), vary from the rest iconographically. The figure on Tonina Monument 135 is seated over a partial quatrefoil; however, the monument is broken subsequently impeding the identification of the figure. Quirigua Monument 23 depicts two partial quatrefoils below a sideways floating figure entangled in smoke or clouds. The figure may either be a ruler (Looper 2003) or a transitional being (Wilson-Mosley, et al. 2010). Since the overwhelming majority of figures have been rulers or elites and the database was almost evenly distributed between human and otherworld figures, this leaves quatrefoil frames to account for all of the otherworld beings. So who was depicted inside of quatrefoils? This

category is decidedly more complex since the frames functioned in two distinct ways within the database. They either framed the entire image or they framed a single figure.

When the action was illustrated within the frame, there was almost always more than one figure, the overwhelming majority of whom were portraits of actual personages. So who was in these quatrefoils? The Motmot Marker from Copan depicted two rulers, one living and one deceased (Figure 3), Caracol Altar 13 (Figure 24), and Cancuen Panel 3 (Figure 71) each depicted a ruler in relation to with two lesser figures. The Copan Peccary Skull depicted two elites in action (Figure 91). The Creation Stone from Palenque (Figure 39) illustrated a ruler in the left cartouche; however, the monument was broken so it is hard to discern what the cartouches relationship was to the rest of the monument. The Altar from El Peru (Figure 54) depicted a ruler seated within the frame. The Copan ballcourt markers also depicted a ruler- however, only in the center marker (Figure 74); the other two markers depicted only otherworld beings. However, all three markers reference a game played between the ruler and the underworld. Tikal Altar 10 (Figure 72) appears to be the exception in that it depicts a captive and not an elite figure. The iconography on this monument is significantly different from the others. The captive appears to be floating above and not within the quatrefoil. In contrast, when the action takes place within the quatrefoil, the ruler is directly placed within this potent location.

Assuming the validity of this assertion, it is possible to reinterpret several other monuments that also depict the action as taking place within the frame. First, Sculpture 131 from Copan (Figure 52) can be reinterpreted as depicting a ruler positioned in the center surrounded by attendants. This is supported if we consider the style of the headdresses worn by the figures in the lobes, which were those of attendants (Chase and Chase 2001:127). In

addition, Altars Q (Figure 81) and R (Figure 80) from Quirigua may also depict rulers and not otherworld beings or deities, as suggested byLooper (2003). This is further supported by the iconographic similarities between these monuments and the Altar from El Peru, as well as the lack of clear iconographic markers figuring the actors as extramundane.

When the quatrefoils appear as part of the scene, but do not function to frame the action, the overwhelming majorities depict otherworld denizens. Piedras Negras Stela 40 (Figure 87) depicts an ancestor within the frame. The sarcophagus cover from Palenque depicts named deceased individuals. Stela 1 from Bonampak (Figure 85), the West jamb from the Temple of Cross at Palenque (Figure 84), Tikal Altar 4 (Figure 53), and Tikal Structure 5C-4 Lintel 2 (Figure 49) all depict deities. Who was within these quatrefoils seems to vary, but the overwhelming majority were positioned below, next to, or attached to a ruler.

5.3.2 Ritual

The assertion that living rulers and elites were the prominent figures associated with the quatrefoil strongly suggests that their depicted actions also relate to the meaning of the symbol. Chapter 4 demonstrated that within the monuments depicted that actions related to sacrificial ritual are prominently shown. However, what rituals were being conducted by rulers appeared to be contingent upon their relationship with the symbol. Accordingly, in the following discussion, I assess quatrefoils according to use-as associated with the ritual, as framing the ritual, and as personal adornments of figures conducting rituals.

5.3.2.1 *Conjuring Portals*

The monuments where the ritual was depicted as happening outside of the quatrefoil denote that the quatrefoil was related to the ritual being conducted. Thus, understanding what that relationship was has the potential to elucidate its role within the illustrated scene. These monuments generally depict rituals related to sacrifice, war, and rulership, indicating that the quatrefoil may have been necessary to and/or conjured by the action taking place.

Sacrifice was implied through the presence of bloodletting instruments and related paraphernalia. Tonina Monument 135 (Figure 90) depicts a figure seated on a partial quatrefoil holding a stingray spine placed within a catchment bowl. On Piedras Negras Stela 3 (Figure 28) both the stingray spine in the decorated headdress and the underworld markers upon which the main figure is seated imply sacrifice. The quatrefoil also appears to the right of the main figure on Piedras Negras Stela 3 on a lidded vessel with the profile Chaak within. Since the quatrefoil appears on a ceramic vessel however, it is unclear whether the figure portrayed inside was part of the decoration or if the quatrefoil was functioning as a portal. On the South Jamb from the Temple of the Foliated Cross (Figure 83) and on the West Jamb from the Temple of the Cross (Figure 84) the main figure identified as Pacal is depicted holding a decorated stingray spine in his left hand. The quatrefoil appears attached to his belt and is clearly a portal as denoted by the deity (possibly Chaak) hanging from it. Piedras Negras Stela 40 (Figure 87) is perhaps the best example of a ruler's ability to conjure a portal through sacrifice. On this monument the ruler is scattering a substance, most likely blood (however it could also be water or corn) into a partial quatrefoil situated below. In this partial quatrefoil is the bust of a much larger figure who appears to be emerging from a throne. The figure holds a stingray spine and is dressed

elaborately. It is likely that the lower figure was a previous ruler. All that can be verified is that this individual was already deceased. The quatrefoil, therefore, represented a portal to the otherworld through which the ruler could interact with a particular inhabitant (Clancy 2009).

One goal of warfare for the Maya was to “capture not kill the enemy, particularly an enemy of high status” in order to return the captive(s) home to incorporate them into ritual that ultimately ended in their demise (Schele and Miller 1992:212-213). Rulers, therefore, by depicting themselves dressed as warriors, not only demonstrated their physical prowess but also their ability to perform the rituals that “upheld the cycle of kingship” (Schele and Miller 1992:220). The relationship of rulers dressed as warriors and quatrefoils may have been a way to visually depict their ability to conjure a portal through the sacrifice of a captive. This is demonstrated on Lintel 2 from the Tikal (Figure 49). The victorious ruler is depicted seated across from five partial quatrefoil portals through which deity heads emerge. However, the Copan Jambs from Temple 18 (Figures 58-61) and Stela 1 from Bonampak (Figure 85) depict the ruler, dressed as a warrior, standing over earth monsters with quatrefoils. Consequently, these monuments not only relate to warfare but also to earth monsters. Since earth monsters appear to have been distinctly depicted at each site, these cases may be specifically related to the ruler’s ability to access a portal related a specific site.

Finally, several monuments depict quatrefoils below the feet of rulers dressed in ritual wear. Machaquila Stelae 4 (Figure 76), 7 (Figure 23), 8 (Figure 77) and 10 (Figure 56) all depict the ruler holding a manikin scepter. This particular scepter was a sign of rulership, ancestor recall, and ritual bloodletting (Schele and Freidel 1990:414). Furthermore, the depiction of these rulers wearing fish nibbling on water-lily headdresses and the conflation of the quatrefoil with a

water lily denotes that they were in a transitional state. The Sarcophagus Lid from Palenque (Figure 86) also denotes transition, this time by depicting the ruler either emerging from or transcending into the underworld through the jaws of the earth monster (Figure 86). Bordering the cover were three named deceased individuals framed by partial quatrefoils. Stela 6 from Caracol (Figure 51) also depicts a ruler holding a ceremonial bar, a conventional sign for rulership that symbolized sky and vision path (Schele and Freidel 1992:416). Finally, four monuments from Yaxchilan depict a specific ritual related to the flapstaff: Stela 11 (Figure 43); Lintels 9 (Figure 44), 33 (Figure 45), and 50 (Figure 46). Grube (1992) interprets the flapstaff ritual as a dance. Collins (2010), however, has established that the lack of the raised heels on many of the monuments previously interpreted as relating to dance suggest this interpretation is false. However, they do appear to relate to the summer solstice.

5.3.2.2 Frames of Power

The illustration of rulers within quatrefoils denotes their intentional placement within the cosmic nexus of the universe. The center was an extremely potent locale that not only oriented the world and conjoined the three-worlds but also provided access between the different realms. Consequently, what actions they depict themselves performing is directly indicative of how they were using that locale to illustrate and transform their power. .

Three common themes were depicted in the iconography within quatrefoil frames that included rituals related to rulership, period endings, and ancestor recall. The Motmot marker from Copan (Figure 22) illustrates ancestor recall through the depiction of the second ruler of Copan engaged in a ritual with the founder of the dynasty, Yax K'uk Mo', who was deceased at the time the monument was commissioned. Since the action takes place within a quatrefoil, it

can be ascertained that the living ruler was depicting himself in action with the deceased one to illustrate both his legitimacy to the throne as well as his ability interact with otherworld inhabitants. The Copan ballcourt markers also illustrate the ruler's ability to enter a transitional state and interact with the otherworld (Figures 74-76). On these markers the ruler was individually depicted in different stages of a ball game in which he was victorious against denizens of the otherworld. This also illustrates the ability of the ballcourt to function as a portal to the underworld. The ruler was depicting not only his ability to play the ballgame in the underworld, but also his ability to return as a victor.

Several monuments depict rituals related to sacrifice. Caracol Altar 13 (Figure 24) depicts the ruler receiving a gift of a fan or more likely a decorated stingray spine and a captive from another individual. Sacrifice is further implied on this monument by the presence of flint emerging from the corners (Chase and Chase 2009:225). Altar 10 from Tikal (Figure 72) depicts the sacrifice of a bound figure by illustrating the captive on a palanquin floating over a portal to the underworld thereby signifying his transitional state between the earth and underworld. In addition, two monuments depict period-ending rituals that were often celebrated in association with sacrifice (Taube 1988). The Peccary Skull from Copan (Figure 91) depicts two figures seated on either side of a bundled stela-altar pair that was being dedicated. The El Peru Altar (Figure 54) text indicates the ruler was celebrating his fifty-two years anniversary that corresponded to a period ending (Taube 1994).

The iconography of several monuments, while not directly illustrating a specific ritual, visually demonstrated particular "spatial positing" that in turn delineates their "hierarchy in ritual" (Palka 2002:429). Cancuen Panel 3 (Figure 71) Copan Monument 131 (Figure 52),

Quirigua Altar R (Figure 81), and the Palenque Creation Panel (Figure 39) all depict the ruler in symbolic action with their right hand extended denoting that they were directing the scene.

Interestingly, Quirigua Altar Q (Figure 81) depicts the ruler's left hand extended, a gesture not commonly depicted since the right hand was favored (Palka 2002).

5.3.2.3 Royal Portals

Finally, there are the quatrefoils that functioned as personal adornments. The selective use and inclusive iconography of these quatrefoils indicates that their meaning may have been transformed into a symbol pertaining to rulership. Almost all of the figures wearing quatrefoil adornments were rulers or the wives of rulers. Furthermore, with the exception of one monument, all of the examples were depicted with crossed-bands in the middle. The crossed band, otherwise known as the “mat” or “pop” sign, is a conventional symbol for rulership. It has also been interpreted as the “cosmic umbilicus” relating to “supernatural pathways, birth, fertility, and cosmically imbued substances” (Guernsey 2010:82). While it is possible that there were multiple meanings imbued within the symbol, the similarity to the pop sign aligns it with rulership.

Chapter 4 illustrated that the use of the quatrefoil was also connected to the conjuring of portals through sacrifice, either of self or of a captive. At Yaxchilan the symbol was commonly worn by figures that had conducted were overseeing a self-sacrifice bloodletting ritual that resulted in the conjuring of a vision serpent, as illustrated on Lintels 14 (Figure 47), 24 (Figure 40), 25 (Figure 41). At Naranjo, the sacrifice was of a victim, as implied by the presence of a captive situated under the feet of the ruler often dressed as a warrior; see Stelae 13 (Figure 36), 21 (Figure 33), 24 (Figure 31), and 29 (Figure 32). Xultun also depicts a captive under the feet

of the ruler (Figure 48). At Piedras Negras sacrifice of a captive was implied by the warrior dress of the ruler on Stelae 3 and 8 (Figures 29 and 30), the presence of bloodletting instruments on Stelae 1 and 3 (Figures 28 and 29), and the illustration of a dead sacrificial victim below the ruler on Stela 11 (Figure 30). At Bonampak on Stela 2 (Figure 25), the woman wearing the quatrefoils holds bloodletting instruments. Finally, on Lintel 2 from Structure 5C-4 at Tikal (Figure 49) the ruler in warrior garb sits on the throne of the vanquished ruler from Naranjo, indicating the capture and potential sacrifice of this individual (Martin and Grube 2008:82).

While these data indicate that the quatrefoil functioned to imbue the actor with the ability to conjure a royal portal and potentially “the emergence of ancestors from the underworld” (Spero 1986:186) the symbol was limited in geographic distributions. Chapter 4 suggested that the symbol may have originated in the Usumacinta basin and been spread through contact into a larger area in the Southern Maya Lowlands. Chapter 4 also demonstrated that quatrefoil was also restricted in its use. Generally, only rulers with questionable parentage, no direct linkage to the throne, or who had ascended to the throne during a time of political instability utilized the symbol as an adornment.

5.3.3 Transformation

The monuments with quatrefoils consequently had the ability to function on multiple levels. Fundamentally, the symbol fused the horizontal directionality and vertical layering, visually creating a map of how the Maya conceptualized space. When utilized in elite artworks, the symbol denoted the ruler’s ability to conjure and enter portals, conveying their ability to mediate between realms (Guernsey 2010:91). Furthermore, the ruler’s placement within the quatrefoil denoted their ability to enter the nexus of the universe to conduct rituals.

However, the symbol also functioned to reinforce and even transform concepts concerning rulership (Gillespie 1993:71). Specifically, the ability to imbue the ruler with the power to exist and interact with multiple world-levels and channel the power of the cosmos could function to visually demonstrate their right to rule. As clarified by the use of the symbol as an adornment on personal costumes of personages that needed to legitimize their right to rule either because of dubious heritage or political instability, the quatrefoil was inherently a symbol of political authority.

5.4 Summary

The quatrefoil was an extremely complex symbol that embodied a large amount of information that could simultaneously function on multiple levels. The symbol could denote the horizontal division of the earth by appearing as the carapace of a turtle. It could function as a portal connecting the otherworld to the human world. It could function as a cosmogram embodying both the horizontal and vertical partitioning of the world and the concept of cosmic center. It could place a ruler within a frame of power illustrating their ability to interact at the nexus of the universe. It could symbolize a ruler's ability to conjure a portal. However, the consistent association with rulership and transition demonstrate that the quatrefoil, as a symbol with significant time depth, was appropriated by the Maya to communicate not only spatial ordering of the universe but also to legitimize political authority.

CHAPTER 6: DISCUSSION AND CONCLUSIONS

6.1 Introduction

In the preceding chapters the quatrefoil was examined by using a variety of techniques, including analysis of the formal presentation, the archaeological contexts focusing on the venue and monument type, and the iconographic contexts through analysis of the surrounding and specific associations. In Chapter 5 the data suggested that the meaning of the quatrefoil, while multifarious, was inherently directional and could function as a portal suggesting that it could be considered a cosmogram. In addition, more specific meanings could be teased from the exploration of the entirety of context specifically relating to the institution of rulership and to the use of the symbol to control, direct, and translate power. Now, the identification of the quatrefoil as a symbolic cave will be examined with the same iconography. Then, the concepts embedded within the interpretation of the quatrefoil can ultimately address whether or not the symbol could function to transmit shared worldviews and ideologies.

6.2 Of Quatrefoils and Caves Part II

This section expounds upon the previously discussed problems with interpreting the quatrefoil as a cave (Chapter 2) by directly addressing whether the iconography supports this assertion. At the basic level, quatrefoils could function as portals and they were depicted with earth and potentially, cave iconography. Consequently, assuming the current definition of a cave as physically any break in the surface of the earth, a cave functioned as a portal to the

underworld. Therefore, exploring whether the iconography of the quatrefoil supports or refutes this assumption is necessary for understanding the symbols role in Maya culture.

6.2.1 Earth and Caves Contexts

The iconography associated with the quatrefoil could place the symbol within earth and cave contexts, specifically when depicted with the tun sign, earth monsters, vegetation, or specific deities. It has been suggested that the tun sign may represent a drip-water formation in a cave (Fash 2009:240) based on the addition of a watery tendril hanging from the bottom of the stepped circles. This addition could thereby transform the stone into a stalactite (or drip water formation found commonly in caves). While this is a possibility, it does not adequately address the presence of the tun with the tendril in non-cave contexts. For example, Altar Q from Quirigua (Figure 87) depicts this sign in the lower bundled oval object which functions as the base of a throne upon which the figure is seated. While it has been argued that the quatrefoil represents a cave, the bundled object itself is clearly not a cave. While perhaps a more focused study is warranted, for now I restrict the tun sign to its literal meaning as “stone;” its use therefore denotes that something is made of stone (Stone 2011).

The quatrefoil also appears as part of the earth monster, otherwise known as Witz or Cauac, on several monuments including the NE, NW, and SW Jambs from Temple 18 at Copan (Figure’s 45-48), Stelae 4 and 6 from Caracol (Figures 38 and 39), and Altar 4 from Tikal (Figure 53). These zoomorphic creatures have been interpreted as caves in the surface of the earth (Taylor 1978:5), as an iconographic representation of a living mountain (Schele and Freidel 1990:418), and as portals to the underworld (Chase and Chase 2009:225); none of these definition being necessarily exclusive of the another. Taylor (1978:2), demonstrates that these

monsters can be identified by their consistent location in the bottom register of monuments and by their specific markings that include the tun or stone symbol composed of a stepped cluster of dots, vegetation, eccentric foreheads, eyelashes, quatrefoil and partial quatrefoil motifs. These zoomorphs symbolized entryways in various aspects, including the “swallowing the dead,” the depiction of “gaping jaws,” and the quatrefoils on the zoomorph (Chase 2009:225). They also appear to have been site-specific. Consequently, quatrefoils, in conjunction with an earth monster, likely delineate a portal, but not necessarily a physical cave.

Several quatrefoils appear in what has been referred to as cave contexts based on the idea that caves were associated with fertility and vegetation, were the abodes of deities, and were places of birth and emergence in Maya thought. Addressing two monuments that have the maize deity within a quatrefoil frame, Quirigua Altar Q (Figure 81) and Bonampak Stela 1 (Figure 85),Looper (2003) argues that the central figure on Altar Q is the maize deity because of (a) the presence of foliation emerging from the corners of the quatrefoil; (b) the use of a quatrefoil frame on a ballcourt marker similar to the Copan markers; and the fact that the Copan markers depict events relating origin myths. However, there are several lines of evidence that suggest this monument, and by extension Altar R (Figure 80) which was found with Altar Q and depicts similar imagery, is wrong. First, these altars were found out of context in a plaza, not in a ballcourt. Second, there is no third marker as is normal for the style of ballcourt during the Classic Period. Third, the iconography within the Quirigua altars is not similar to that found on the Copan markers; notably, there is only one figure within the quatrefoil at Quirigua, dressed in ritual wear and seated on a throne, whereas at Copan there are two figures, both otherworldly and human, either standing or kneeling, and each dressed in ballgame wear. Finally, there is no

foliation emerging from the quatrefoil corners at Copan. This thesis has previously shown that single full figures depicted within quatrefoils were most likely rulers. Besides the possibility of iconography on the belt denoting the figure as the Maize god, there were no other iconographic markers to suggest the figure was otherworldly. Foliation may here just indicate the earth and not necessarily the maize deity.

The maize deity was depicted on Bonampak Stela 1 emerging from a cleft in the earth monster (Figure 24). Interestingly, while this indicates that the cleft functioned as a portal, the relationship between Bonampak and Yaxchilan at this time, as well as the similarity of the earth monster to the Yaxchilan emblem, suggests that the iconography was depicting something more complex than the maize deity emerging from the earth. As a result, none of the quatrefoils clearly illustrate a connection to maize and the maize deity.

Several monuments also depict the deity Chaak within quatrefoil frames. Chaak, the god of lightning, rain, and thunder, was thought to live in a cave where these natural elements originated (Stone 1995:41). Stela 3 from Piedras Negras (Figure 28) appears to depict Chaak within a quatrefoil frame on a lidded vessel. The Creation Panel from Palenque (Figure 39) depicts Chaak in the right quatrefoil cartouche. The deity hanging from the quatrefoil on the South Jamb from the Temple of Foliated Cross (Figure 83) and the West Jamb Temple of Cross (Figure 84) may also be Chaak. Whether these examples illustrate a quatrefoil cave that houses the deity Chaak or simply a portal can be debated; however, fundamentally none of these examples clearly illustrate a physical cave location.

6.2.2 Caves, Portals, and Transition

If quatrefoils were symbolic cave-portals to the underworld, they should be depicted in iconography either directly as portals or indirectly associated with portal iconography such as transitional elements in Maya worldview. Addressing the direct evidence, the iconography supports that caves could function as portals and that quatrefoils could function as portals. However, homogenous functions do not necessarily indicate identical meanings. Several lines of evidence support this: (1) while caves could function as portals, not all portals were caves (the ancestor cartouches from Yaxchilan [Figure 86]) (Tate 1992); (2) not all quatrefoils were directly illustrated as portals (the Ahau Altars from Caracol [Figures 49-56]); (3) not all caves were illustrated as quatrefoils, such as the niche scenes from Piedras Negras; (4) while new evidence suggests that caves may have been portals to flower mountain (Taube 2004) and not necessarily the underworld, quatrefoils were depicted with underworld (Panel 3 from Cancuen [Figure 71]), earth (the Jambs from Temple 18 at Copan [Figures 45-48]), and celestial iconography (the Sanctuary Roofs from Palenque [Figures 66 and 67]). Most importantly, there is no iconography that directly depicts a quatrefoil as a physical cave. I would argue that physical caves do appear in the art and iconography of the Maya, most notably in the niche scenes from Piedras Negras which position the ruler in a carved expanse ascending to the throne. These stelae visually draw similarities to the niche scenes depicted during Olmec times.

Addressing the transitional iconography associated with quatrefoils, many examples contain water lilies. Water lilies pose an interesting conundrum: they are not often associated with caves and they are symbols of transition. Any connection between water lilies and caves is problematic. While water lilies can grow in cenotes, they also grow in other locales such as

agricultural raised fields (Fash 2005:122), which are distinctly not caves. It is also important to note that water lilies had meaning beyond water. They were transitional symbols that could live above and below the water simultaneously. Their presence in iconography could denote water management (Fash 2005) or power imbued from an actor's ability to enter a transitional state (Chase 2009), but their meaning is dependent on interpretation and context.

6.2.3 Redefining Caves

This leads us to the problem of the definition of a cave as any break in the surface of the earth, whether real or conceptual. This definition does not address the complexity of the feature in Maya worldview. Accordingly, caves

“encompassed references to the natural landscape and topography as a cave opening to the earth; as a watery place associated with rain, aqueducts, pools of water, and mists; as an analog to the maws of beasts that symbolized dangerous passage and emitted watery vapors and breath; as places associated with fertility, ancestors, and creation narratives like that of the Maize God; as a symbol that marked places where time and its passage were commemorated and where the past/otherworld intersected with the present/terrestrial world; and as a quadrilateral symbol that mapped both space and time, functioned toponymically to mark geographic and supernatural locations” [Guernsey 2010:90]

The physical locales of caves were clearly important features with a ritual focus in ancient times (Brady and Prufer 2005). Physical caves encompass a variety of distinguishable features including cenotes, ponds, chultuns, and actual caves. While it has been argued that these features were regarded as part of the same natural phenomena (Fash 2005), it is important

to note that they were distinguished in epigraphy. In essence, caves were multidimensional and conceptualized in a way in Maya culture that was “fluid, polysemic, [and] sometimes contradicting” (Stone 1995:34). It is my assertion that while the archaeology of caves has significantly advanced our understanding of these features, an in-depth study of cave iconography is necessary to better understand the role of caves of Maya culture.

In conclusion, the iconography of quatrefoils does not support the theory that they symbolized physical caves in Maya worldview. The quatrefoil-cave association has been a driving factor in the interpretation of quatrefoils, but this study indicates that, while they had similar functions, quatrefoils were not visual representations of caves.

6.3 Summary

Analysis of the quatrefoils suggested several relevant patterns related to the presentations of the quatrefoil. Stylistically, there appears to have been a preference for complete quatrefoils that were curvilinear in form, despite the available substitutions. In addition, while the symbol was used as both a frame, as a constituent of personal adornment, and as an element, the former two comprised the overwhelming majority of the database. The majority of the quatrefoils appeared on altars, stelae, and wall panels. In regards to the archaeological proveniences of the examples, the examples were fairly evenly distributed between accessible and intimate spaces. Reviewing the iconographic associations, both the surrounding and intimate contexts of the quatrefoils were consistently associated with rulership, earth, transition, and otherworld iconography with a specific preponderance of iconography related to period-endings and sacrifice rituals.

6.3.1 Distributions

There were several pertinent patterns related to geographic and temporal distributions of the quatrefoil during the Classic Period and within the Southern Maya Lowlands. A specific pattern noticeable in the distributions directly correlated to the quatrefoils deemed part of the personal adornments. Their appearance seems to have been restricted, with examples only appearing during the later end of the Late Classic Period, and in two groupings in the northern edge of the Southern Maya Lowlands. One grouping appears along the Usumacinta basin, where the majority of examples come from Piedras Negras and Yaxchilan, and the other extending eastwards to encompass major sites including Tikal and Naranjo. Personal adornment quatrefoils also appear to have been selectively used during times of potential political imbalance, including political instability and questions of legitimacy.

Regarding larger distribution patterns the preceding chapters demonstrated that the quatrefoil first appeared at the sites of Copan, Caracol, Tres Islas and Naranjo. The quatrefoil then expanded during the Late Classic Period, reaching peak geographic expansion and greatest variability. During the Terminal Classic the symbol receded, appearing only at the sites of Caracol and Machaquila. This distribution can be better contextualized when one considers the trade routes in use during this period of time. Chase and Chase note (in press:11) that the distribution of “Belize Red” ceramics supports a trade route that “penetrated coastal Belize by means of the Belize and Sibun Rivers and also the southeast Peten by means of the Mopan River.” The route extended along the southeast Peten by means of the Maya Mountains and the Pasion region and along the Machaquila River (Chase and Chase 2011; in press:11). The first appearance of the quatrefoil along the eastern edge of the Maya lowlands further supports the

identification of this trade route as important during the Early Classic Period. Specifically, the early appearance of the quatrefoil at Caracol corroborates the importance of the site extending back potentially into the Preclassic Period partly due to its positioning along a “potentially competing trade network” to that of Tikal (Chase and Chase In press:12). The appearance of a quatrefoil at the site of Tres Islas during the Early Classic Period also supports the importance of this trade network because the site had Teotihuacan iconography and was located along the confluence of the Pasion and Machaquila rivers (Chase and Chase in press:11).

As expected, as time progressed the symbol and its importance would have migrated west into the surrounding areas. The geographic distribution of the symbol during the Late Classic Period supports this conclusion. During the Terminal Classic when the Maya area saw significant changes, specifically in power relationships, the symbol continued to be used at Caracol and Machaquila. Both of these sites are located along the previously discussed trade route. This supports the assertion that the trade route was functioning as means of trade and communication into the Terminal Classic Period (Chase and Chase in press:13).

6.3.2 Configuring the Quatrefoil as an Ideological Symbol

Despite significant diversity, through the evaluation of context it was determined that the quatrefoil embodied multiple themes simultaneously. It was a symbol for the horizontal partitioning of the world as denoted by its four-part shape and associated iconography. It could function as a portal between worlds and was a liminal locale due to its ability to exist in more than one worlds-level simultaneously. It also had the potential to represent a portal on the carapace of the turtle-earth. The confluence of these suggests that the quatrefoil is a model of cosmic order denoting that the symbol was a material way to selectively disseminate information

about how the world was constituted. Furthermore, as a symbol with a long duration, that the quatrefoil supports the idea of a shared pan-Mesoamerican belief system regarding the fundamental ordering of the world.

The constant association of the quatrefoil with conventions of rulership suggests that it not only convey information about how space was ordered but also who could occupy that space. The symbol communicated information about shared ideological systems through its ability to manipulate and negotiate power. Power was generated in several ways; (1) its ability to act as a portal connecting world-levels, thereby ascribing said transitional powers to the actor(s) placed within or associated with the symbol; (2) through the visual presentation of a ruler within the cosmic center on the turtle-earth thereby signifying that the actor was in a particularly potent “position of power and authority” (Mathews and Garber 2004:49); and, (3), when used by elites, the quatrefoil could function to denote or reiterate the ruler’s link to the cosmos, community, and right to rule (Gillespie 1993:71). The quatrefoil as a symbol of political authority could then also legitimize specific political connections and relationships.

6.3.3 A Pan-Mesoamerican Symbol

Analysis of the use of the quatrefoil during the Preclassic Period compared to the Classic Period suggested that there were several significant changes. During the Preclassic Period the quatrefoil was often depicted as the jaws of a monster, which was not seen during the Classic Period with the exception of one monument. In addition, the associated iconography varied significantly between the two periods. This suggests a change between periods. However, upon closer examination one finds that the quatrefoils use may have been more similar. In both periods the symbol is strongly associated with rulership. Furthermore, the quatrefoils from the

Preclassic appear to have functioned as portals, like those from the Classic Period. This is best illustrated on Monument 9 from Chalcatzingo (Figure 5). On this monument the quatrefoils mouth of the monster is so large that a person could have passed through it. Consequently, it may be that Preclassic Period quatrefoils were portals appropriated by rulership to delineate information about worldview and ideology, like the later Classic Period quatrefoils.

The idea that the quatrefoil may have been a pan-Mesoamerican ideological symbol is further supported by its appearance throughout Mesoamerican from the Preclassic and Classic Periods with several examples appearing in the Postclassic, most notably in the codices. Nonetheless, the quatrefoil motif seems to have been specifically appropriated by the Classic Period in the Southern Maya Lowlands. The symbol's distribution follows conventional trade routes. In addition, the symbol does not appear in the Northern Maya Lowlands to the same extent as the Southern Lowlands; rather, the symbol appears to fade in frequency as the transition from the Classic to Postclassic occurs. This is fitting since the institution of rulership was significantly changed between these periods as collapse and disbursement occurred throughout the entire region of the Southern Maya Lowlands.

6.4 Future Research

The goal of this thesis was to augment the previous studies on the quatrefoil by focusing on the Classic Period. By excluding other mediums, such as ceramics, and focusing on elite artwork, a potentially significant number of quatrefoils were not analyzed. Consequently, while this study elucidated potential meanings for the quatrefoil as related to elites, there is a potential for other important but disparate set(s) of meanings for the symbol. A broader future investigation of different mediums could potentially illuminate how the symbol was

communicated spatially. Furthermore, as a potential pan-Mesoamerican symbol imbued with power a broader regional analysis could potentially shed light on the symbols meaning as well as the ability for ideas to travel and be across space and between cultures while some retaining some continuity.

While the symbol does appear to have been a symbolic cave for the Classic Period Maya, as it is conventionally regarded, for this assertion to be proven a more in-depth focus on how caves were depicted in Maya art is necessary. Caves were complex and able to embody a multitude of concepts that were sometimes contradictory (Stone 1995), indicating that the iconography of caves could be equally complex and diverse. Thus, a study on cave iconography has the potential to support, complement, or refute the conclusions presented in this thesis.

6.5 Conclusion

This thesis contributes to the limited database related to the use of this potent symbol. In addition, the re-evaluation of the monuments with quatrefoils has the potential to transform previous concepts about the Maya communication of worldview and ideology and their ability to create, translate, and direct power. In addition, this thesis has applications for the broader understanding of the use of semiotics in archaeological research. Semiotics, while not always utilized, provides a potentially transformative tool for understanding symbols in culture and how they can be used to disseminate information at the local, regional, and even larger scales.

The quatrefoil served as an important liminal symbol to the Classic Period Maya in the Southern Lowlands. The quatrefoil retained some continuity though time, particularly related to its ability to communicate ideas about the spatial ordering of the world and the access to space. The iconography of the symbol suggests that not only was the quatrefoil a symbol for the liminal

locale between the human world and the otherworld where mortal personages could interact with the denizens of the otherworld, but also potentially a place where time, as conventionally regarded, ceased to exist. The cosmic portal, illustrated as the center of the quatrefoil, was an extramundane locale where past and present and the human and otherworld could interact and influence each other. As a potent symbol appropriated by rulership, the symbol could function as a tool for reinforcing and even legitimizing political authority and was especially important for portrayal during times of potential political imbalance.

APPENDIX A: ADDITIONAL QUARTREFOILS

While my goal was to create a database that was as inclusive as possible, several relevant quatrefoils are not included in the body of thesis. Specifically, Monument 171 from Tonina depicts a ball player with quatrefoil adornments, the Altar of Stela 8 from Uaxactun has a badly eroded quatrefoil frame, Altar 23 from Seibal has a quatrefoil frame, and, finally, I found a reference, but no picture, to Altar 1 from Machaquila that supposedly has a quatrefoil. I am noting them here for future investigations.

APPENDIX B: CLASSIC PERIOD QUATREFOILS

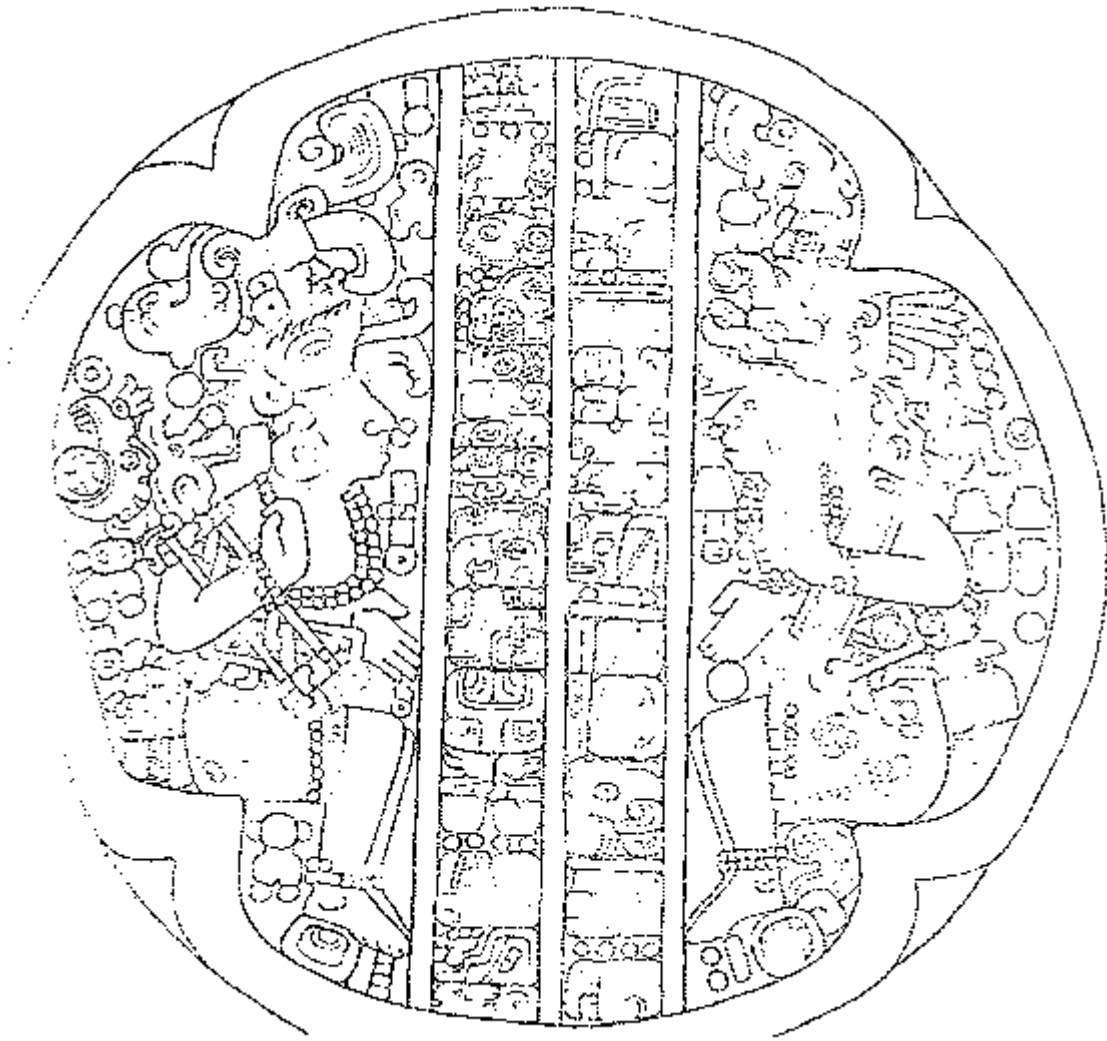


Figure 3 **The Motmot Marker, Copan**

Drawing by Dr. Barbara W. Fash.

Location: Located in a plaza.

Approximate Date: 441 A.D.

Composition: This monument depicts two seated figures each holding a ceremonial bar separated by a horizontal band lined with two rows of glyphs. There are two dates mentioned: one in 435 and the other in 441. The figure on the left is identified as the dynasty founder Yax K'uk' Mo' (who was dead at the time this was commissioned) and the figure on the right is Ruler 2, the successor.

The Quatrefoil: The quatrefoil frames the scene.

Sources: (Baudez 1994; Martin and Grube 2008)

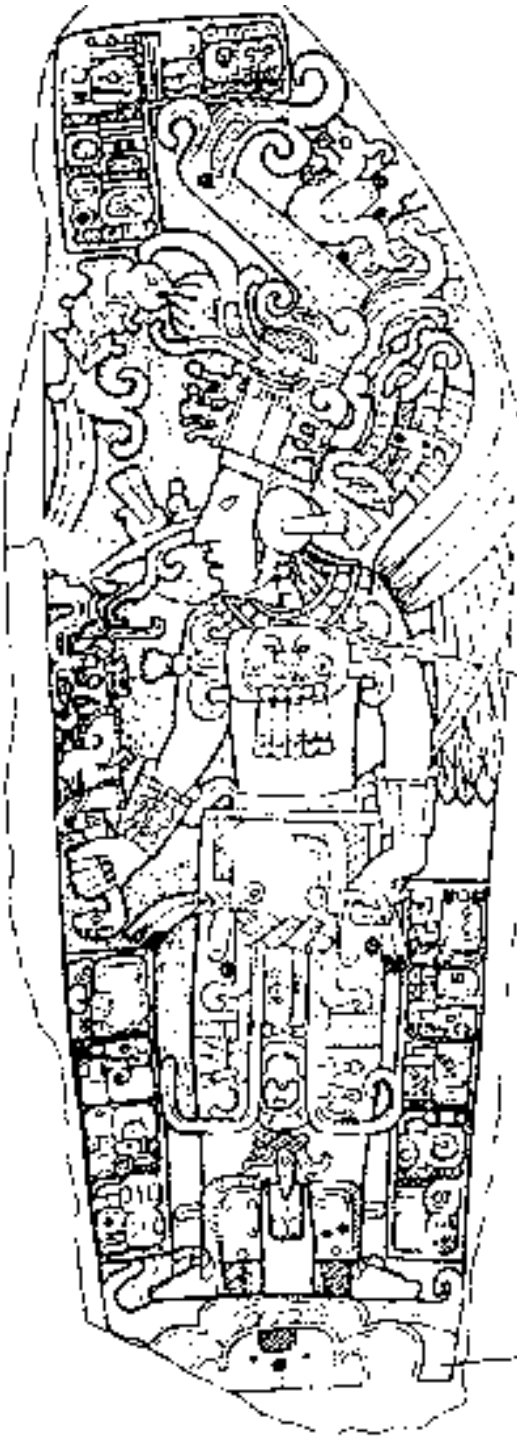


Figure 4 Stela 7, Machaquila

Courtesy of Middle American Research Institute, Tulane University. Drawing after Graham 1967.

Location: The main plaza.

Approximate Date: 830 A.D. (10.0.0.0.0).

Composition: This monument depicts a ruler holding a manikin scepter and wearing a water lily headdress standing on top of a partial quatrefoil/water lily.

The Quatrefoil: The quatrefoil is marked with a glyph relating to the upper word.

Sources: (Clancy 2009; Graham 1967; Graham, et al. 1997; Stone 1995)

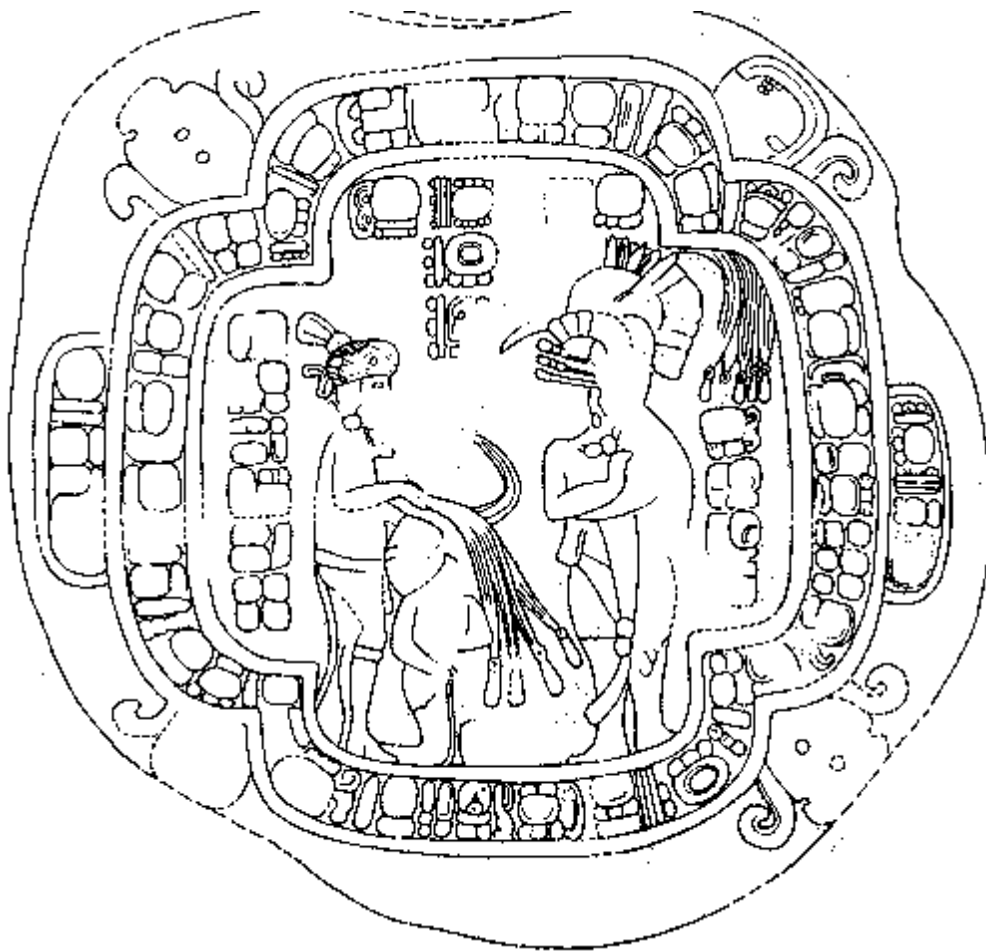


Figure 5 Altar 13, Caracol

Copyright © The Penn Museum. Drawing by LaBerta Ehman.

Location: In front of Structure B5.

Approximate Date: 830 A.D. (10.0.0.0 7 Ahau 18 Zip).

Composition: This altar depicts Ruler X from Caracol being presented a gift of a prisoner and a fan or decorated stingray spine from an elite from another site, perhaps Ucanal.

The Quatrefoil: The quatrefoil, constructed of a glyph band, frames the altar. Emerging from the upper right and lower left corners is the tun symbol and from the upper left and lower right is notched flint.

Sources: (Beetz and Satterthwaite 1981; Chase 1985; Houston 1987; Martin and Grube 2008)



Figure 6 Stela 2, Bonampak

Image courtesy of Dr. Peter Mathews.

Location: A Plaza

Approximate Date: 776 A.D.
(9.17.5.8.9).

Composition: The monument depicts Ruler Chaan-Muan having just completed a blood-letting ritual. He is depicted in the center with his wife and mother, positioned respectfully behind and in front of him, each holding blood-letting instruments.

The Quatrefoil: His wife, named as a person from Yaxchilan, is depicted wearing an elaborate robe with quatrefoils marked with crossed-bands.

Sources: (Mathews 1978)



Figure 7 Stela 35, Piedras Negras

Copyright © Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The terrace in front of Structure R-5.

Approximate Date: 662 A.D. (9.11.10.0.0 11 Ahaw 18 Ch'en).

Composition: This stela depicts Ruler 2 dressed in Teotihuacan warrior garb with a small bound figure kneeling to the left side.

The Quatrefoil: A quatrefoil with crossed-bands is depicted on the belt/sash or lower robe between the main figures knees and is decorated with crossed bands.

Sources: (Clancy 2009; Martin and Grube 2008)



Figure 8 Stela 1, Piedras Negras

Copyright © Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The terrace in front of Structure J-4.

Approximate Date: 706 A.D. (9.13.15.0.0 13 Ahaw 18 Pax).

Composition: This monument depicts the wife of Ruler 3 Lady K'atun Ajaw wearing an elaborate headdress and holding a sheathed blood letter.

The Quatrefoil: Quatrefoils appear on her robe with crossed-bands within.

Sources: (Clancy 2009; Robertson 1983)

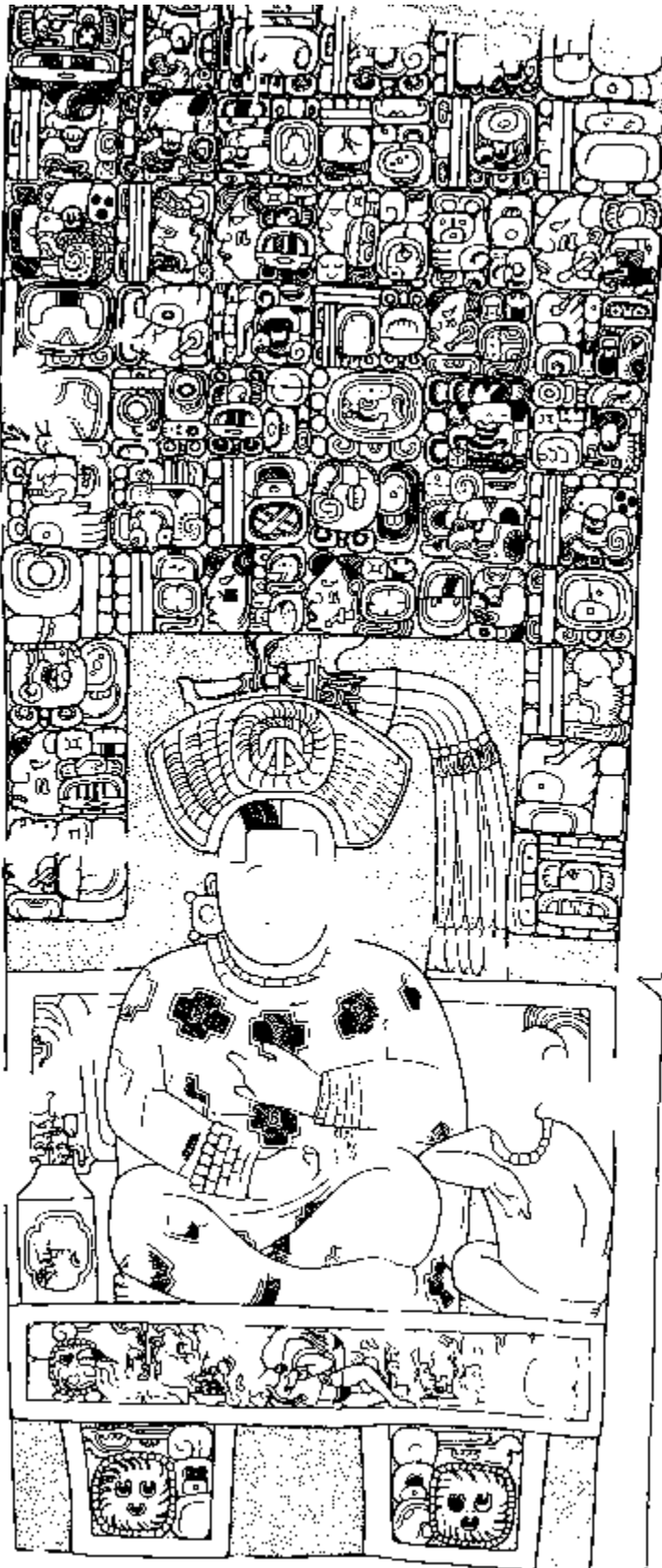


Figure 9 Stela 3, Piedras Negras

Copyright © Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The terrace in front of Structure J-4.

Approximate Date: 711 CE.
(9.14.0.0.0 6 Ahaw 13 Muan).

Composition: On the back of this monument dedicated under Ruler 3 is Lady K'atun Ajaw seated on a throne wearing a headdress with a sheathed blood letter. To the right of Lady K'atun is her child and to the left is a lidded vessel.

The Quatrefoil: Lady K'atun wears a robe that is covered in quatrefoil with crossed-bands and a quatrefoil with Chaak in the middle is depicted on the lidded vessel.

Sources: (Clancy 2009; Martin and Grube 2008)

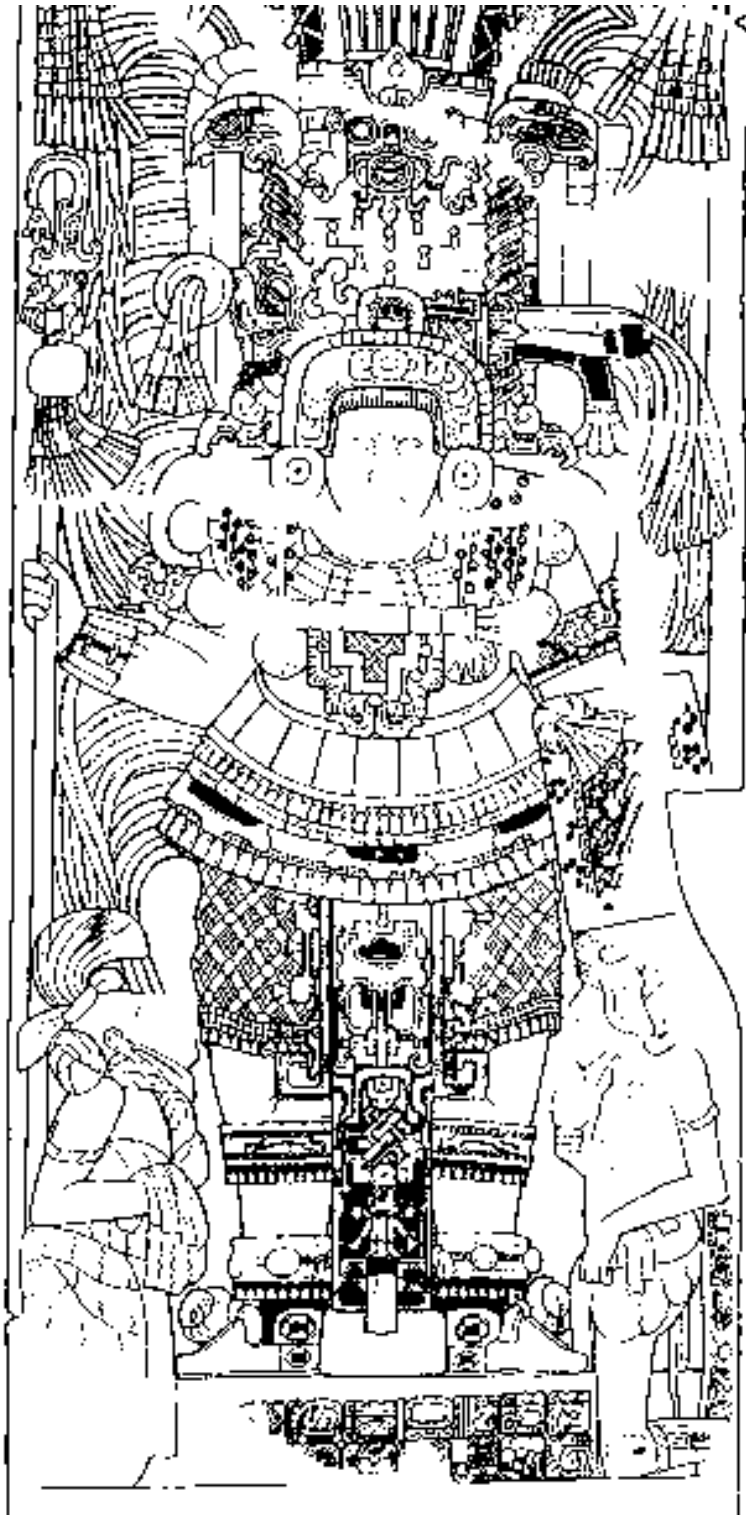


Figure 10 Stela 8,
Piedras Negras

Copyright © Foundation for
the Advancement of
Mesoamerican Studies, Inc.,
www.famsi.org

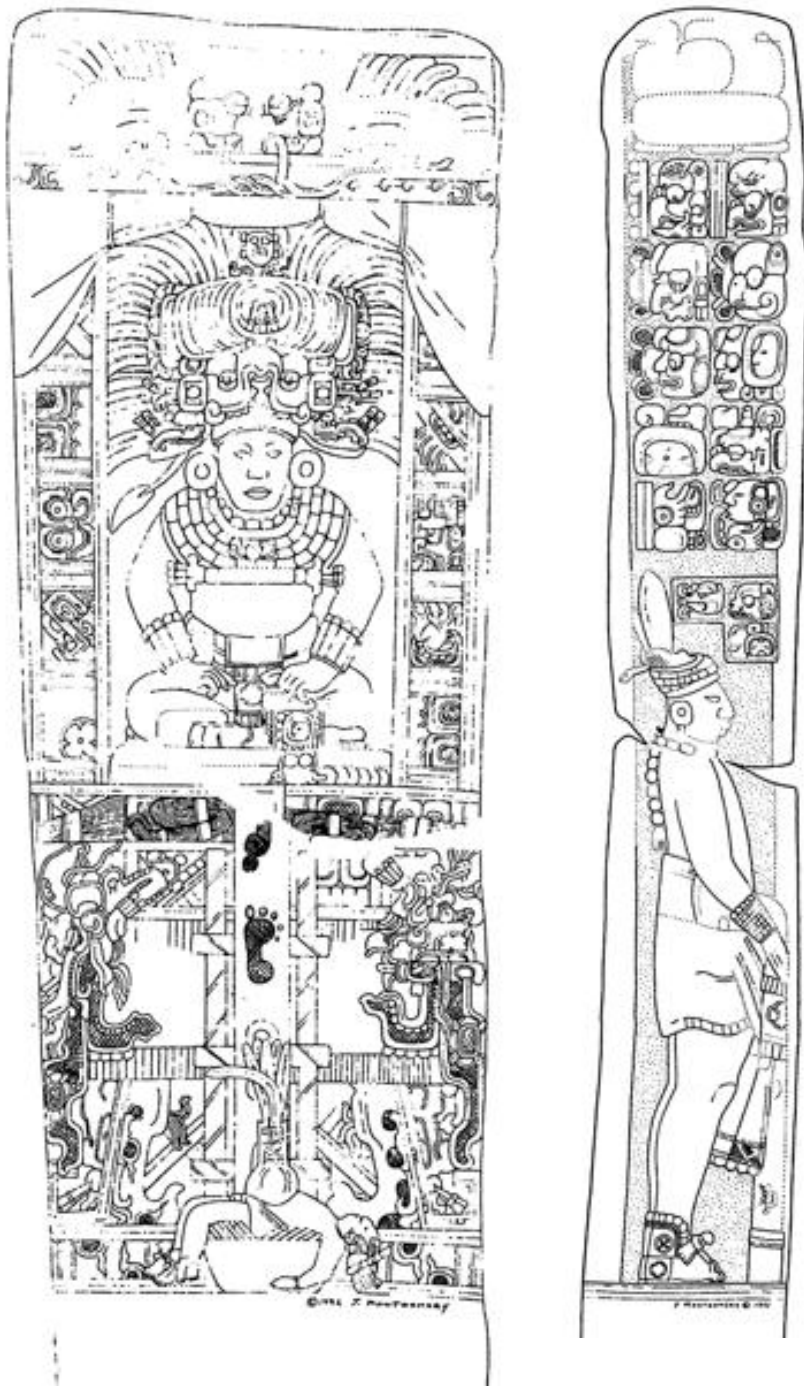
Location: The terrace in front
of Structure J-4.

Approximate Date: 726 A.D.
(9.14.15.0.0 11 Ahaw 18
Sak).

Composition: The stela
depicts Ruler 3 dressed in
Teotihuacan warrior garb
infused with female aspects
with two kneeling bound
captives.

The Quatrefoil: The
quatrefoils with crossed-bands
appear on the sandals of the
ruler.

Sources: (Clancy 2009;
Martin and Grube 2008)



**Figure 11 Stela 11,
Piedras Negras**

(Left: Front, Right: Left Side) Copyright © Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The terrace in front of Structure J-3.

Approximate Date: 729 A.D. (9.15.0.0.0 a Ahaw 13 Yax).

Composition: This monument depicts a Ruler 4 seated in a niche. In the lower register of the monument is a sacrificial child victim in an underworld locale with bloody footprints leading to the ruler. Three additional figures were carved on the side.

The Quatrefoil: The quatrefoils appear on the belt of the Ruler and on the additional left carved figure.

Sources: (Clancy 2009; Martin and Grube 2008).

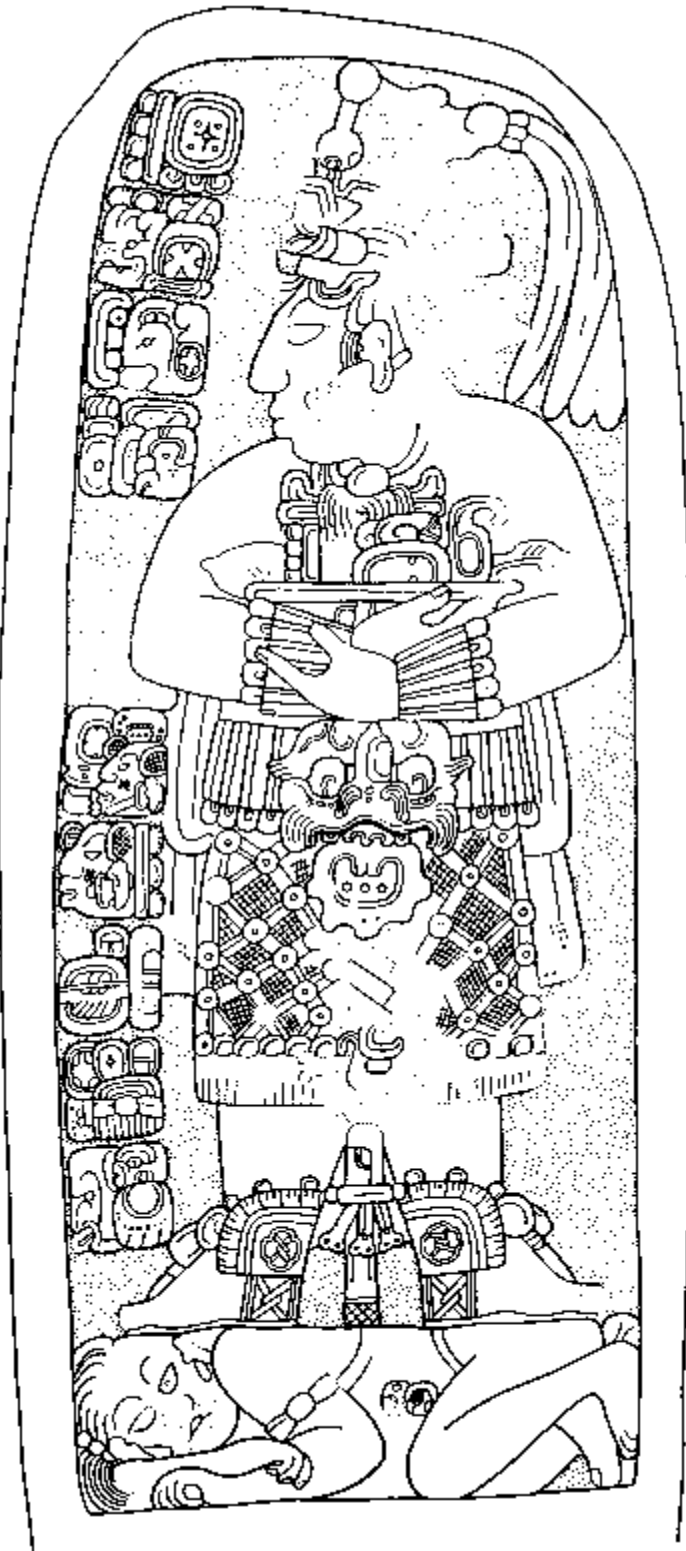


Figure 12 Stela 24, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 1, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The north side of Structure C-7.

Approximate Date: Late Classic.

Composition: The monument depicts Lady Six Sky holding a bundle and standing on top of a captive.

The Quatrefoil: The quatrefoils appear on the sandals and have crossed-bands within.

Sources: (Martin and Grube 2008)

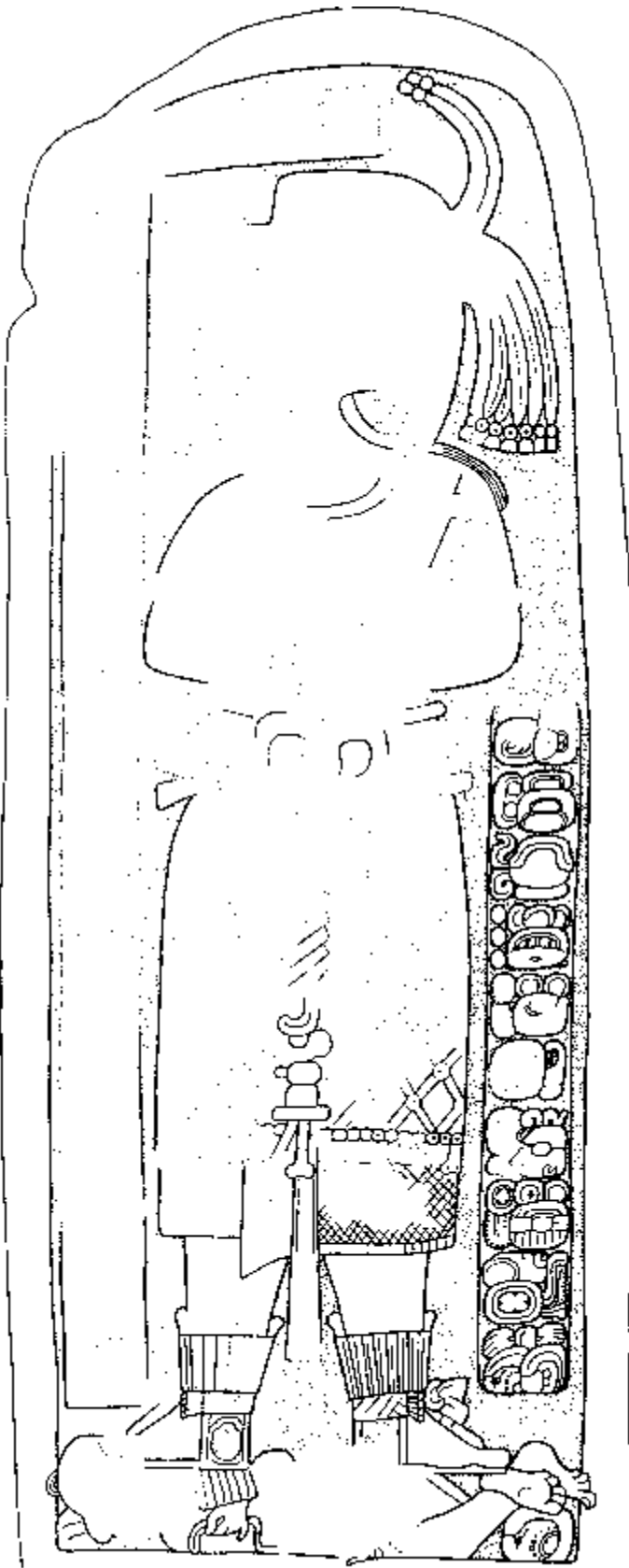


Figure 13 Stela 29, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 2, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The terrace in front of Structure C-9.

Approximate Date: 682 A.D. (9.12.10.5.15 7 Men 13 Yax).

Composition: This stela depicts Lady Six Sky standing on top of a captive in the bottom register.

The Quatrefoil: The quatrefoils have crossed bands and appear on the sandals.

Sources: (Martin and Grube 2008)

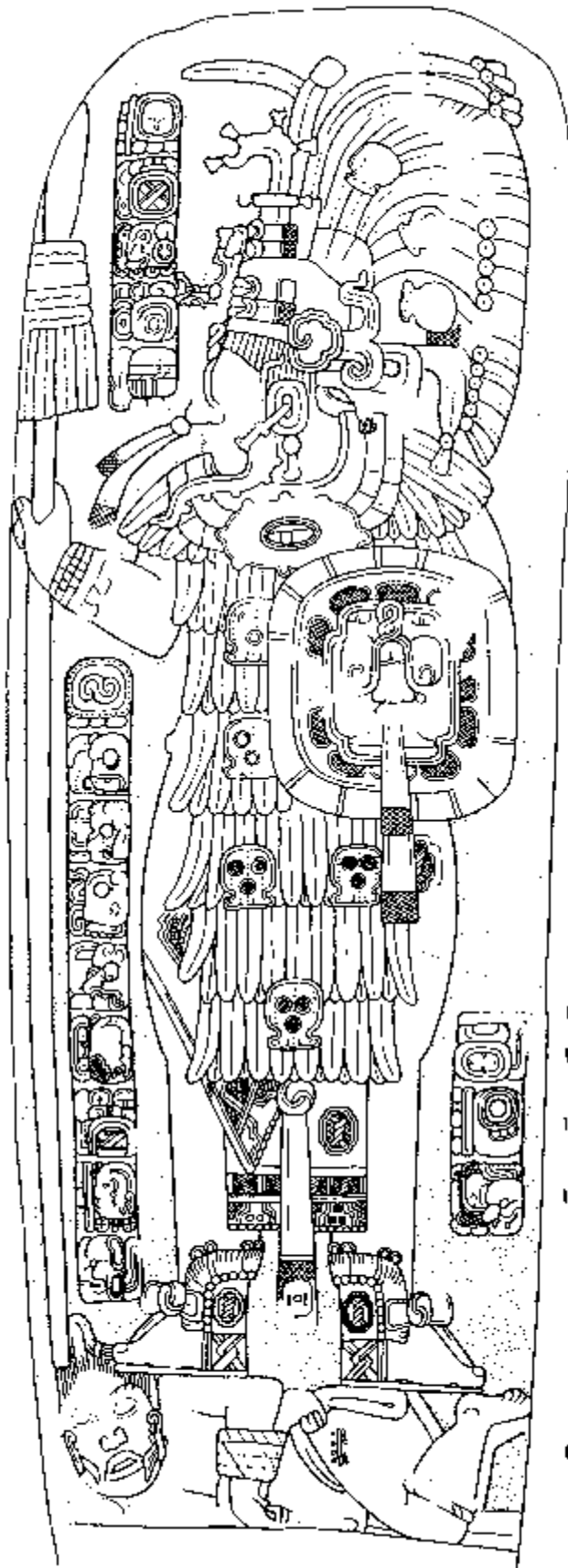


Figure 14 Stela 21, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 1, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The south side of Structure C-6.

Approximate Date: Around 693 A.D.

Composition: The monument depicts K'ahk Tiliw Chan Chaak dressed in warrior wear standing on top of bound captive.

The Quatrefoil: The quatrefoils appear on the sandals, the belt/sash, and on the shield.

Sources: (Martin and Grube 2008)

B

11

12

13

G

5

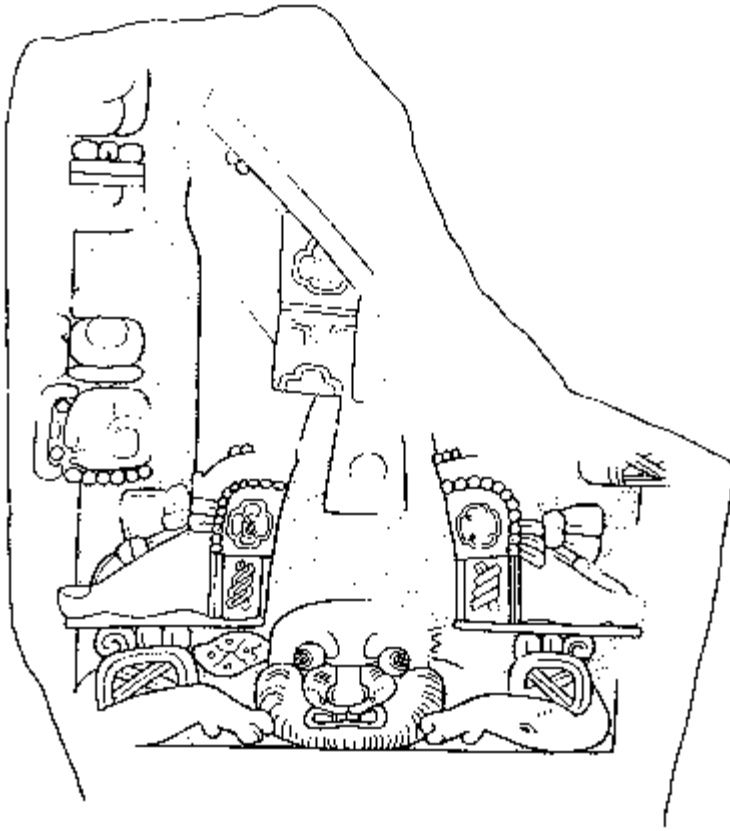


Figure 15 Stela 40, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 2, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The south side of structure D-1.

Approximate Date: Late Classic Period (693-728 A.D.).

Composition: This monument depicts K'ahk Tiliw Chan Chaak standing on top of an otherworld figure in frontal view. The top part of the monument is missing.

The Quatrefoil: The quatrefoils appear on the footwear and have crossed-bands within.

Sources: (Martin and Grube 2008)

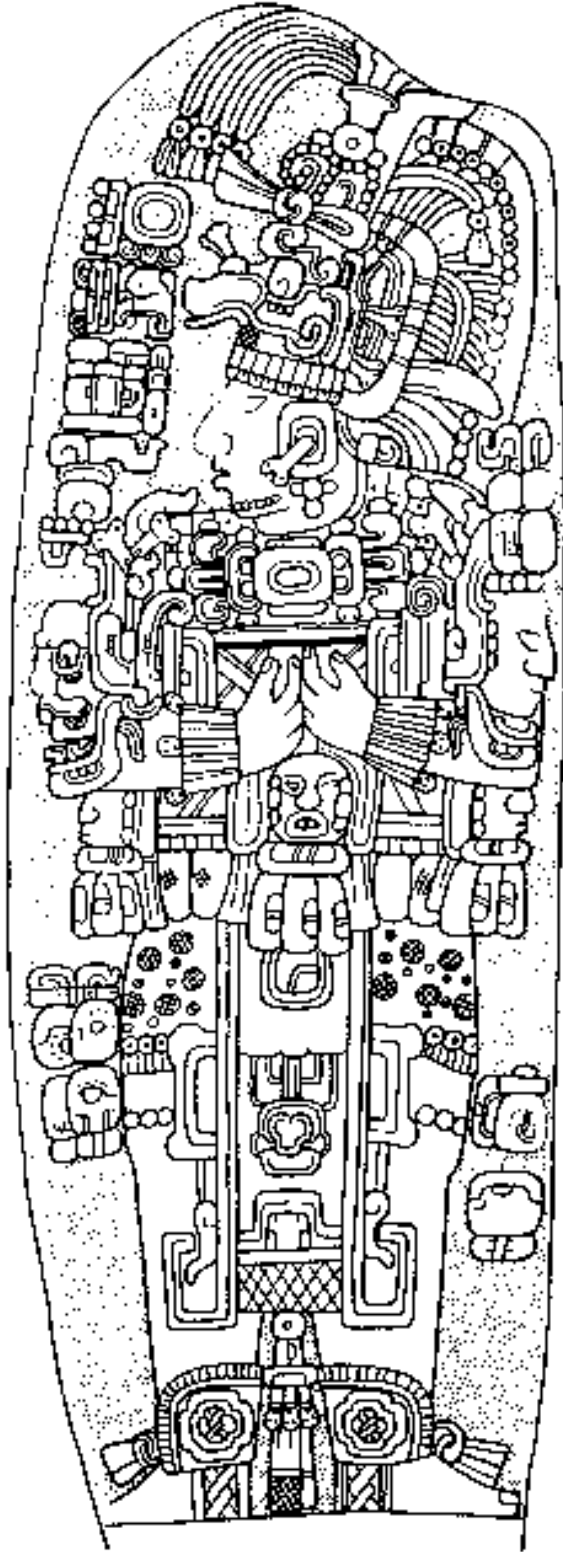


Figure 16 Stela 6, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 1, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The south side of Structure B-4.

Approximate Date: 780 A.D.

Composition: This monument depicts Smoking Batab dressed in ritual wear holding a ceremonial bar

The Quatrefoil: The quatrefoils appear on the high backed sandals and have crossed-bands within.

Sources: (Bassie-Sweet 1996; Graham, et al. 1997; Martin and Grube 2008)



Figure 17 Stela 13, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 1, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The south side of Structure B-19.

Approximate Date: 780 A.D.

Composition: This monument depicts Smoking Batab dressed in ritual wear holding a manikin scepter standing on top of captive in bottom register.

The Quatrefoil: The quatrefoils appear on the high backed sandals and have crossed-bands within.

Sources: (Martin and Grube 2008)

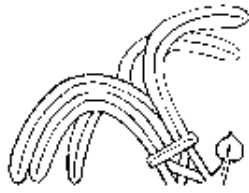


Figure 18 Stucco Figure 2, Palenque

Copyright Merle Green Robertson, 1976.

Location: On the wall of tomb within the Temple of the Inscriptions.

Approximate Date: 683 A.D.

Composition: This stucco sculpture depicts a member of the royal guard holding a manikin scepter.

The Quatrefoil: The quatrefoil appears on the belt hanging between the legs.

Sources: (Miller 1999; Robertson 1991; Spero 1986)



Figure 19 Tablet of the Slaves, Palenque

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: From within group IV however the exact location is unknown.

Approximate Date: Late Classic (721-736 A.D.).

Composition: This monument depicts three individuals seated on human and supernatural benches. The figures on the left and right are offering symbol for rulership to the central figure. The central figure in the position of power and is identified as Ahkal Mo' Naab III.

Quatrefoil: The quatrefoil appears on the belt/sash of the central figure and has crossed-bands.

Sources: (Martin and Grube 2008; Robertson 1983; Stuart and Stuart 2008)

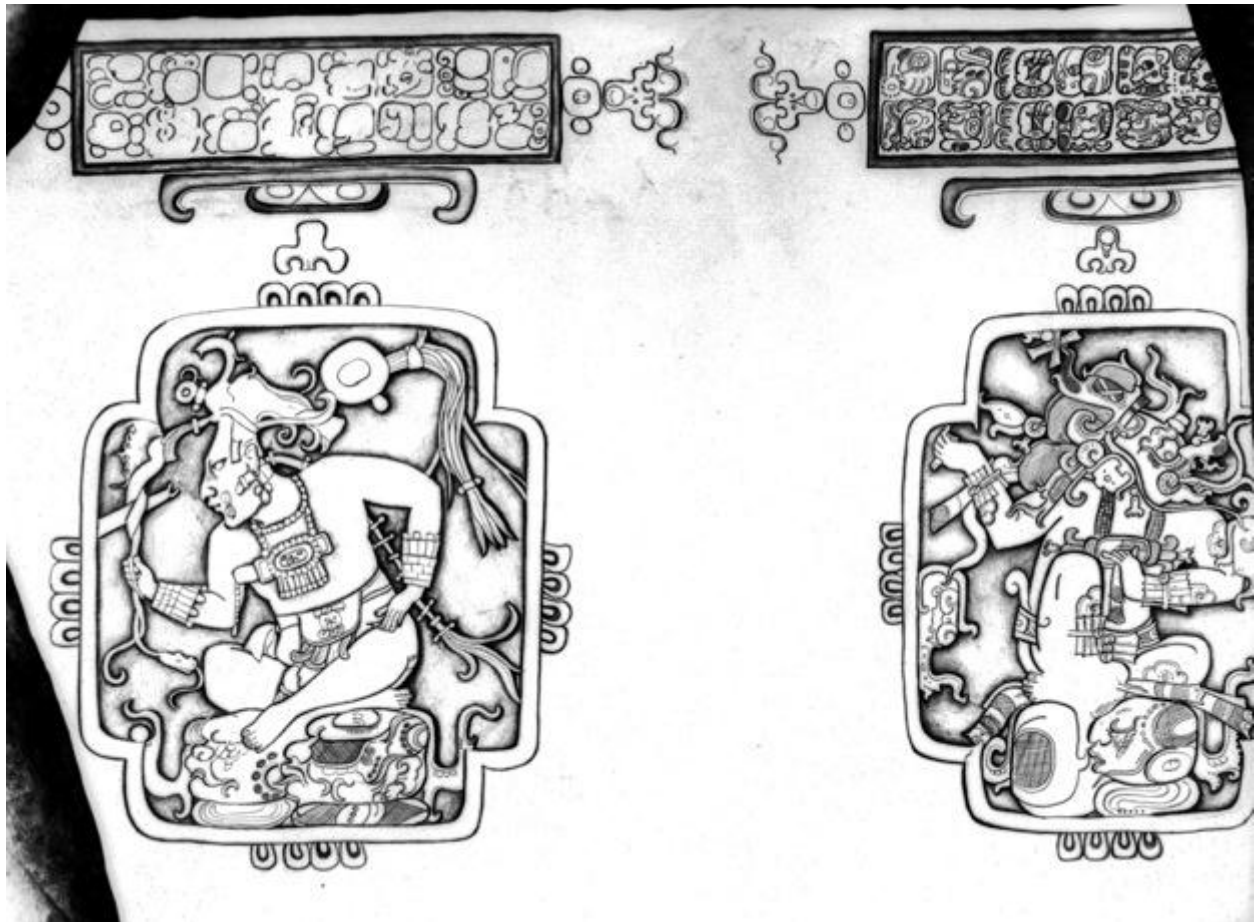


Figure 20 **Creation Stone, Palenque**

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: In the Tower Court.

Approximate Date: 751 A.D. (9.16.0.0.0).

Composition: This monument depicts two rectangular cartouches with a figure in each. Above each cartouche is a hieroglyphs block. Each figure is seated on kawak head thrones. The left cartouche has a ruler within and the right cartouche has Chaak.

The Quatrefoil: The quatrefoils form the frame cartouches.

Sources: (Bassie-Sweet 1991; Robertson 1991)



Figure 21 Lintel 24, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 3, Part 1, Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The Southeast doorway of Structure 23.

Approximate Date: 709 A.D. (9.13.17.15.12 5 Eb).

Composition: The lintel depicts the ruler Itzamnaaj Bahlam III holding a torch staff standing next to a kneeling his wife performing a blood-letting ritual be pulling a thorn laden rope through her tongue.

The Quatrefoil: The quatrefoils adorn the robe of the lady and have crossed-bands.

Sources: (Martin and Grube 2008)

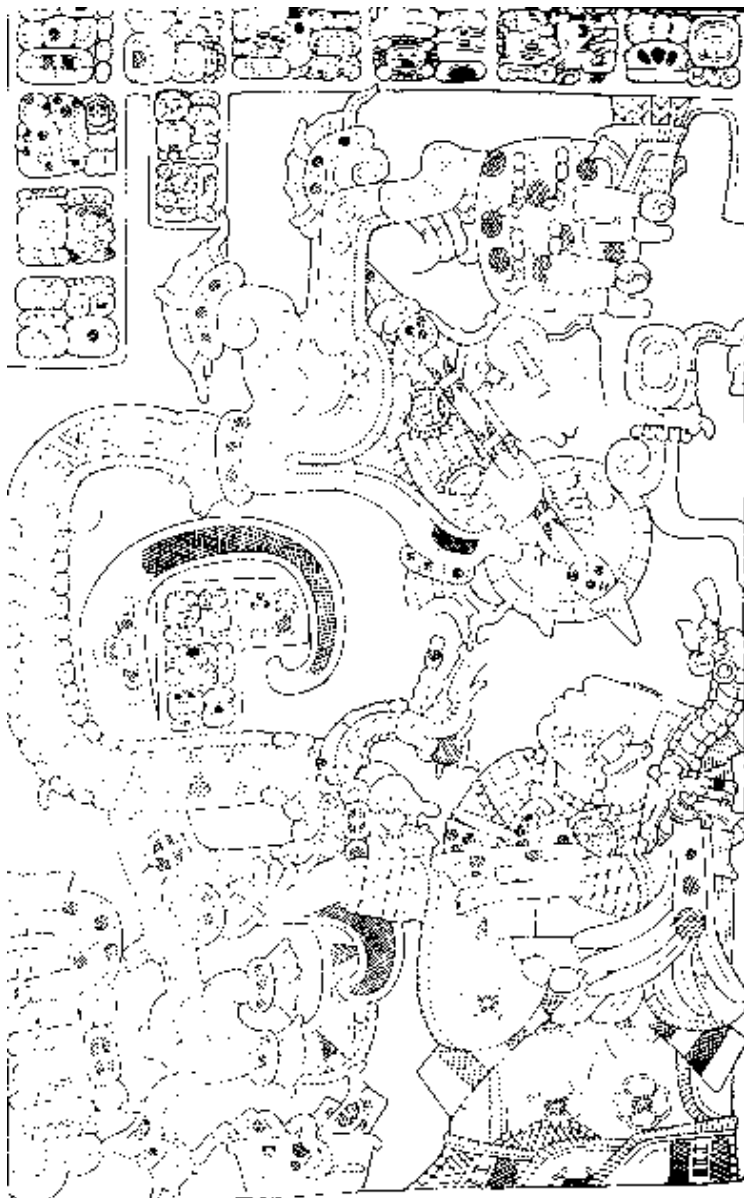


Figure 22 Lintel 25, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 3, Part 1, *Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The Central doorway of Structure 23.

Approximate Date: 681 A.D.

Composition: On this lintel the wife of ruler Itzamnaaj Bahlam III is depicted having conjured a vision serpent by performing a bloodletting ritual.

The Quatrefoil: The quatrefoils adorn her robe and have crossed-bands.

Sources: (Martin and Grube 2008; Tate 1992)

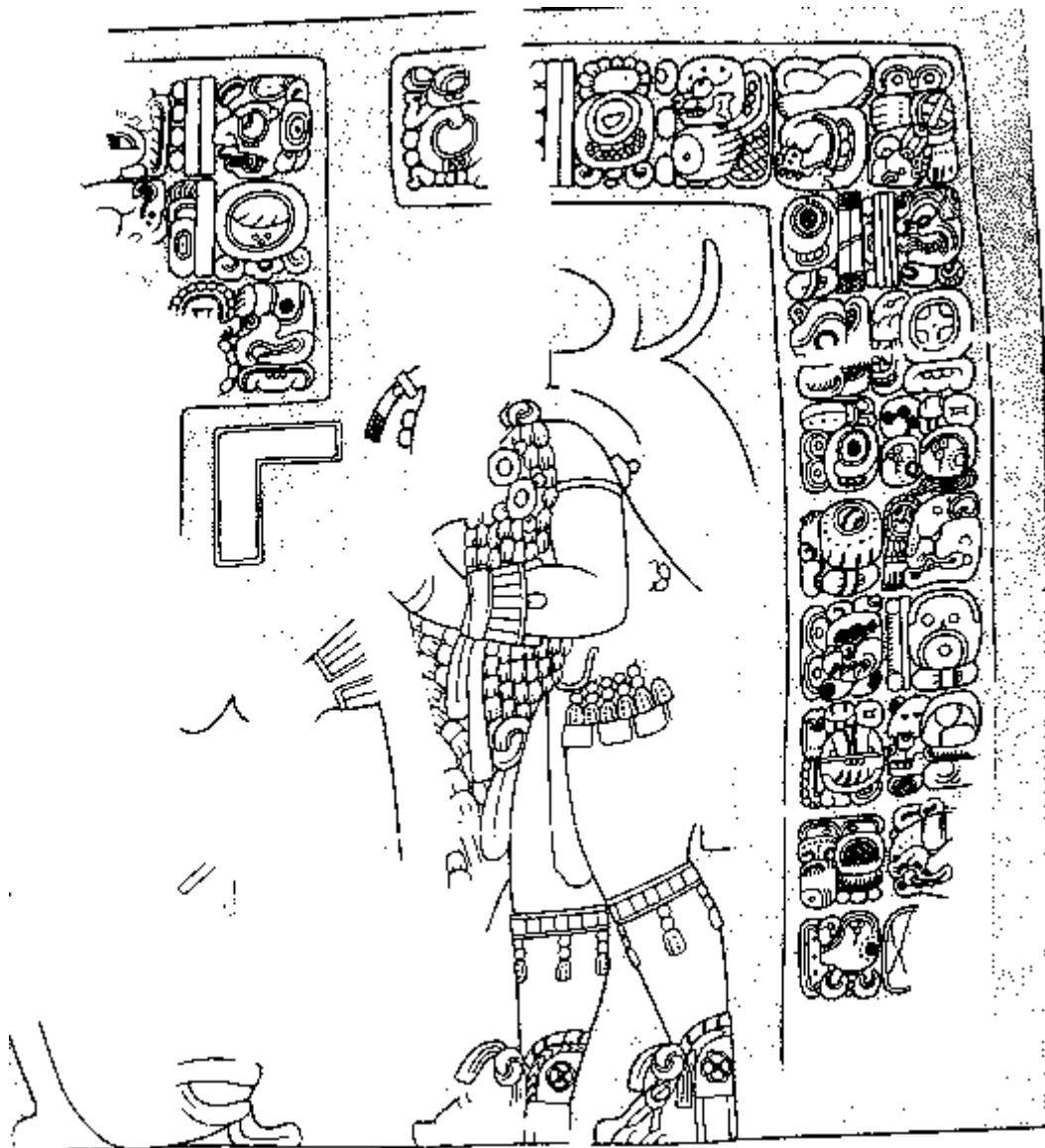


Figure 23 Lintel 46, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 3, Part 2, Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The northeast doorway of structure 14.

Approximate Date: Approximately 681-742 A.D.

Composition: This lintel depicts Itzamnaaj Bahlam III (probably) however the poor preservation makes further interpretations problematic.

The Quatrefoil: The quatrefoils adorn the sandals worn by the ruler and have crossed-bands.

Sources: (Martin and Grube 2008; Tate 1992)

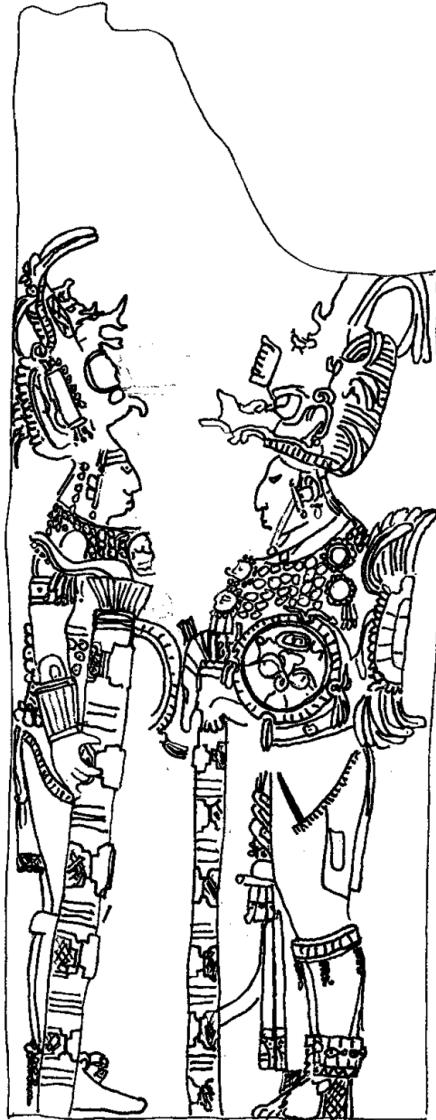


Figure 24 Stela 11, Yaxchilan

Drawing by author (text excluded). Detail after Tate published in *Yaxchilan: The design of a Maya ceremonial city* (1992).

Location: The platform of Structure 40.

Approximate Date: 752 A.D. (9.16.1.0.0).

Composition: This stela depicts the ruler Bird Jaguar IV exchanging flap-staffs with Shield Jaguar I.

The Quatrefoil: The quatrefoils appear on the flap-staffs and have crossed-bands.

Sources: (Tate 1992)

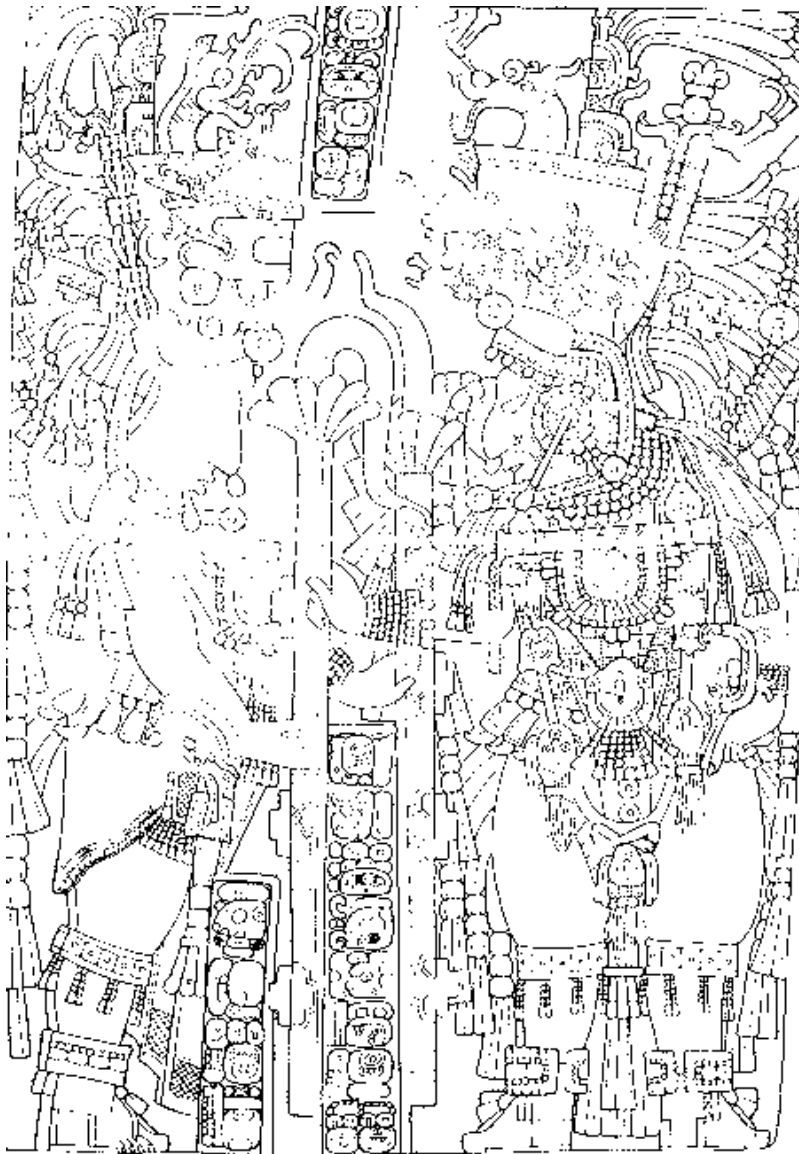


Figure 25 Lintel 9, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 3, Part 1, Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The doorway of Structure 2.

Approximate Date: 768 A.D. (9.16.17.6.12).

Composition: This monument depicts Bird Jaguar IV exchanging flap-staffs with his “brother in law Great Skull.”

The Quatrefoil: The quatrefoils appear on the flap-staffs and have crossed-bands.

Sources: (Chase 1985; Tate 1992)

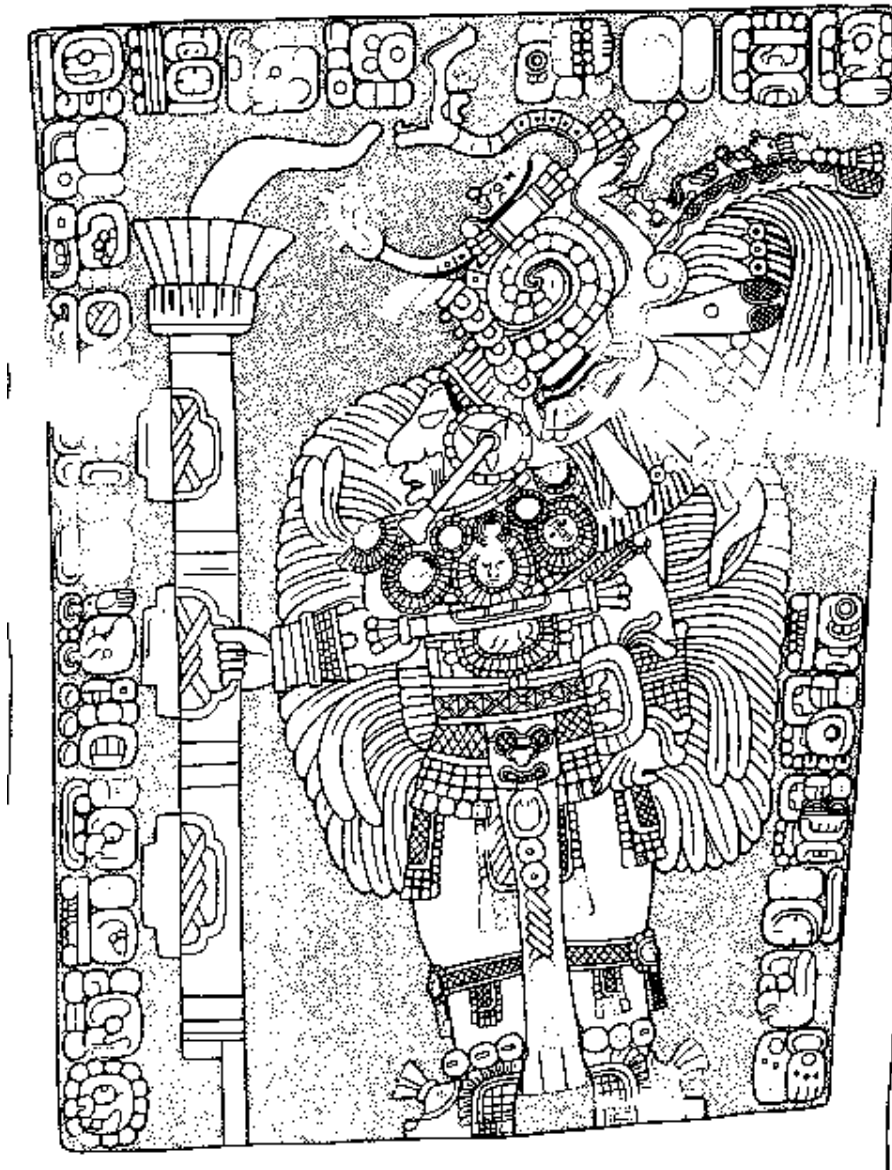


Figure 26 Lintel 33, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 3, Part 2, *Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The doorway of Structure 13.

Approximate Date: 747 A.D.

Composition: The lintel depicts Bird Jaguar IV holding a flap-staff.

The Quatrefoil: The quatrefoils appear on the flap-staff and has crossed-bands.

Sources: (Martin and Grube 2008; Tate 1992)

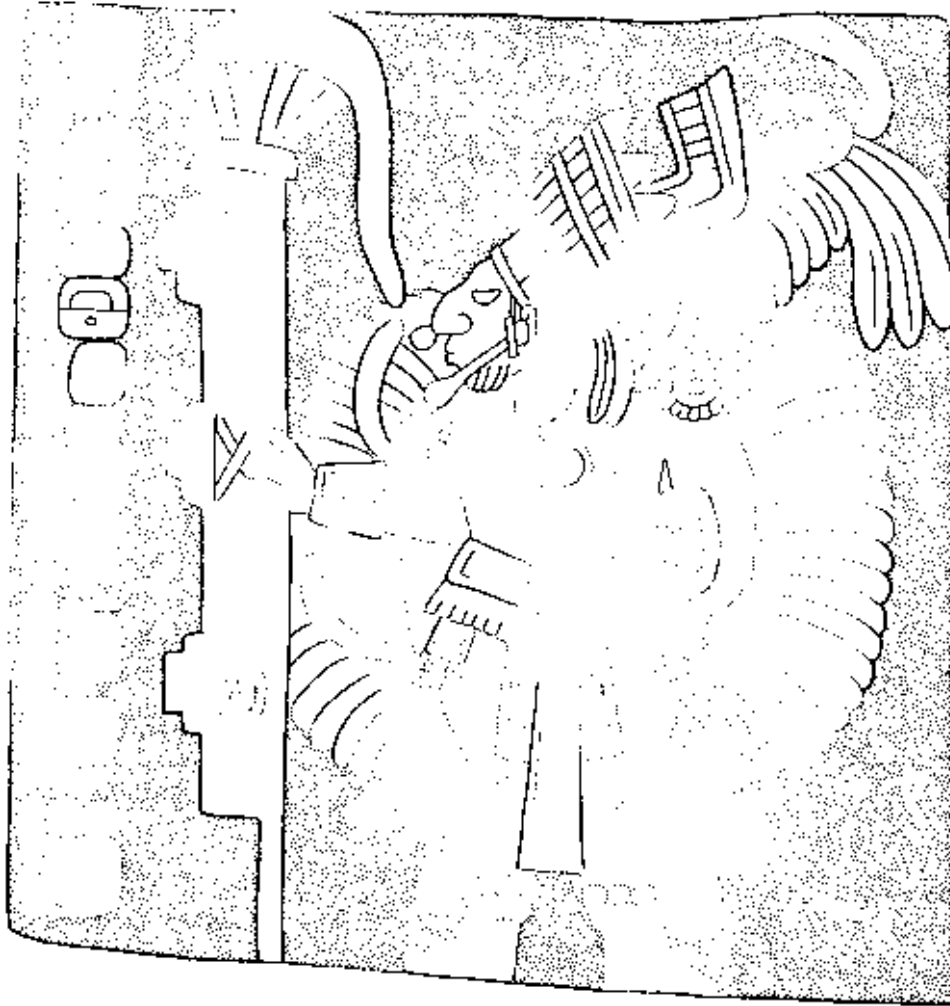


Figure 27 Lintel 50, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 3, Part 2, Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: Structure 13 in the Central Acropolis.

Approximate Date: 752 A.D.

Composition: While badly eroded this monuments depicts Bird Jaguar IV (probably) holding a flap-staff.

The Quatrefoil: The quatrefoils appear on the flap-staff.

Sources: (Martin and Grube 2008; Tate 1992)

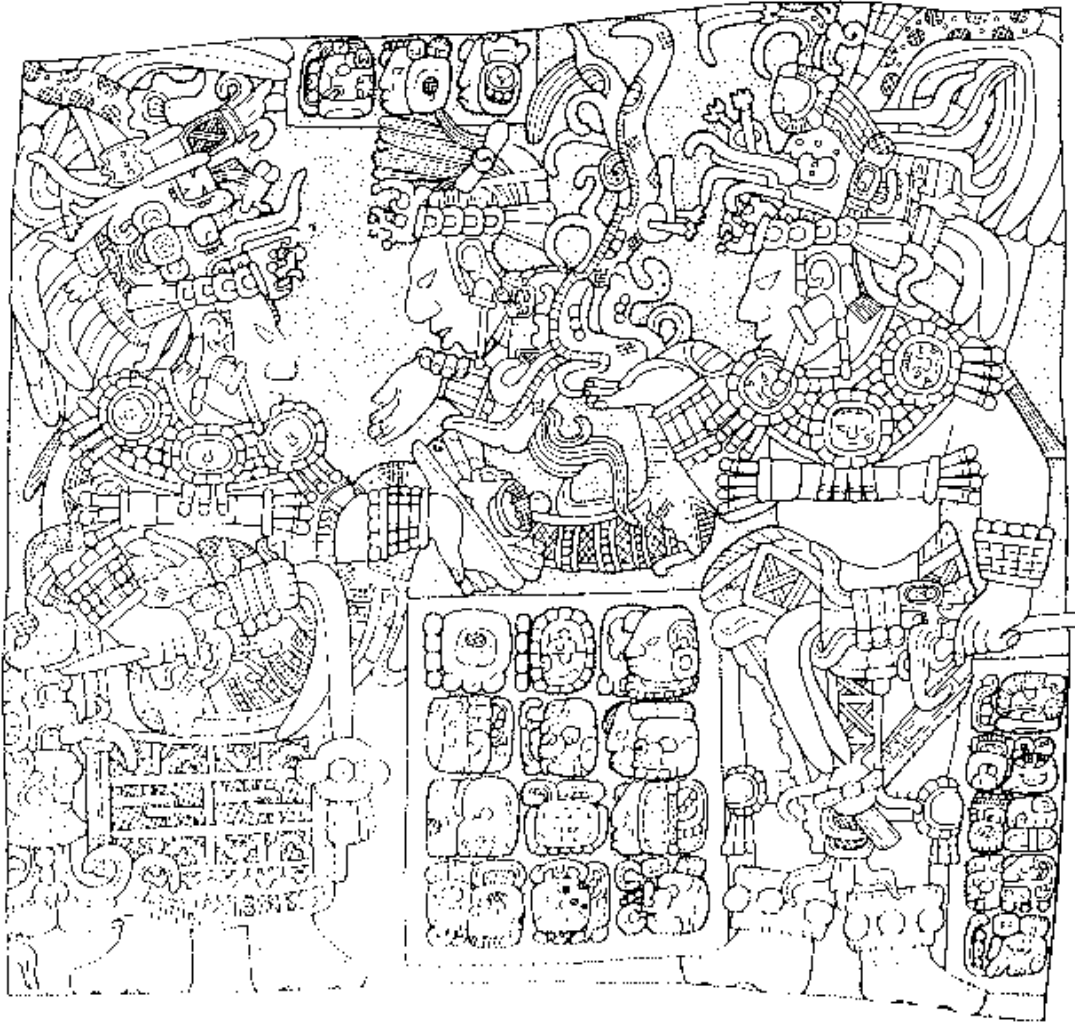


Figure 28 Lintel 14, Yaxchilan

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 3, Part 1, Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The northeast doorway of Structure 20.

Approximate Date: 769-800 A.D.

Composition: This monument depicts Shield Jaguar III and another elaborately dressed figure after having performed a blood-letting ritual. The figure on the left holds a blood letter and a catchment bowl. Based on the costume and patterns at Yaxchilan I suggest that the figure is female, possibly his wife.

The Quatrefoil: The quatrefoils with crossed-bands adorn the robe of left figure and have crossed-bands.

Sources: (Martin and Grube 2008; Tate 1992)



Figure 29 Stela 24, Xultun

V. 5.2 Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 5, Part 2, Xultun*, reproduced courtesy of the President and Fellows of Harvard College.

Location: The plaza in front of structure A23.

Approximate Date: 761 A.D. (9.16.10.0.0).

Composition: This monument depicts the ruler holding a baby jaguar in an upturned hand and a serpent in the lower arm standing on top of a bound captive.

The Quatrefoil: The quatrefoils appear on the lower section of his robe.

Sources: (Clancy 2009; Houston 1986; Tomasic, et al. n.d.)

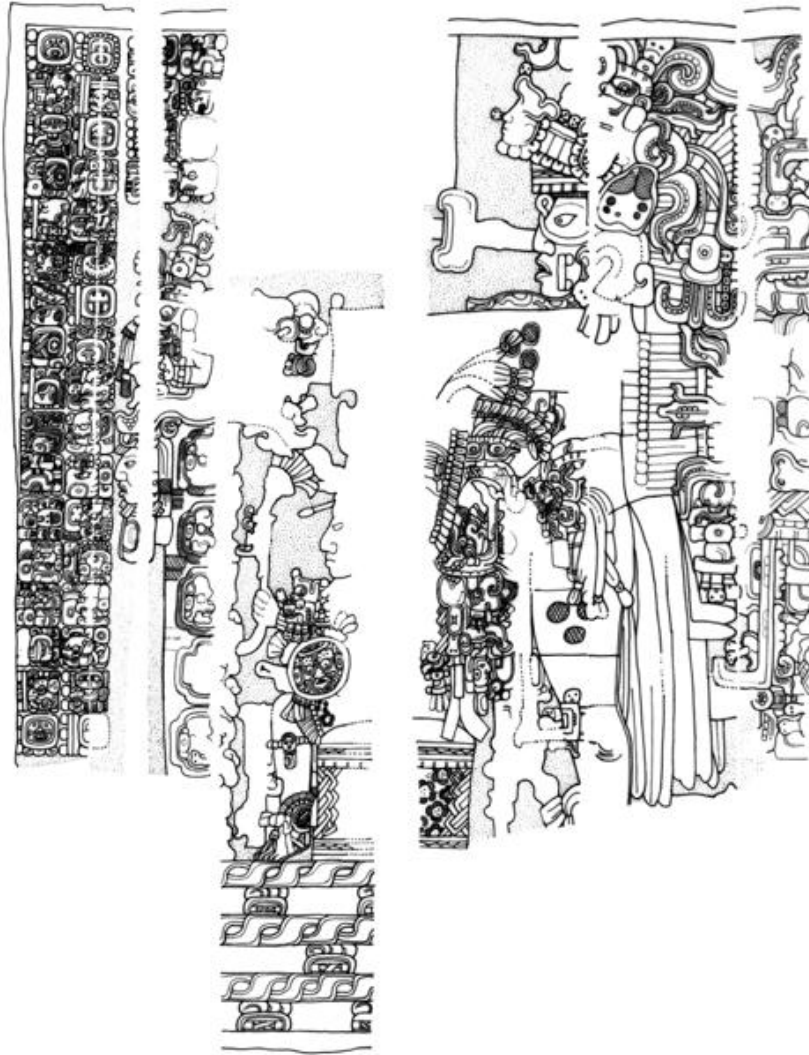


Figure 30 Structure 5C-4 Lintel 2, Tikal

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: Temple 4 Structure 5C-4.

Approximate Date: Late Classic following warfare event in 744 A.D.

Composition: This lintel commemorates the defeat of Naranjo by depicting the Tikal ruler seated on sitting on a bench in place of the Naranjo ruler.

The Quatrefoil: To the left of the seated ruler appear a series of five partial quatrefoils some clearly with cross-hatching and each framing a death head. In addition, on the sandals of the Tikal ruler is a quatrefoil with crossed bands.

Sources: (Jones, et al. 1982; Martin and Grube 2008; Rice 2004)

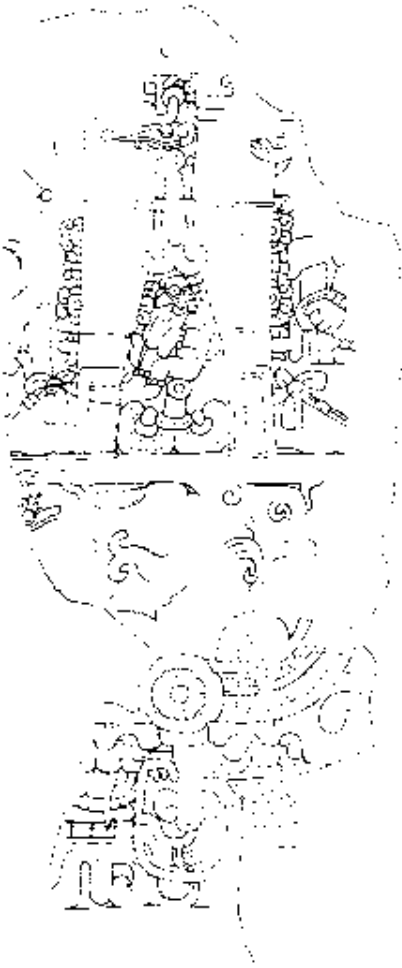


Figure 31 Stela 4, Caracol

Copyright © The Penn Museum. **Drawing** by Carl Beetz.

Location: In a plaza.

Approximate Date: 583 A.D.

Composition: The upper half of the stelae is missing, however the lower half depicts a ruler either Yajaw Te' K'inich or the ruler for the snake polity standing on an elaborate earth monster.

The Quatrefoil: The quatrefoil adorns the forehead of the earth monster.

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

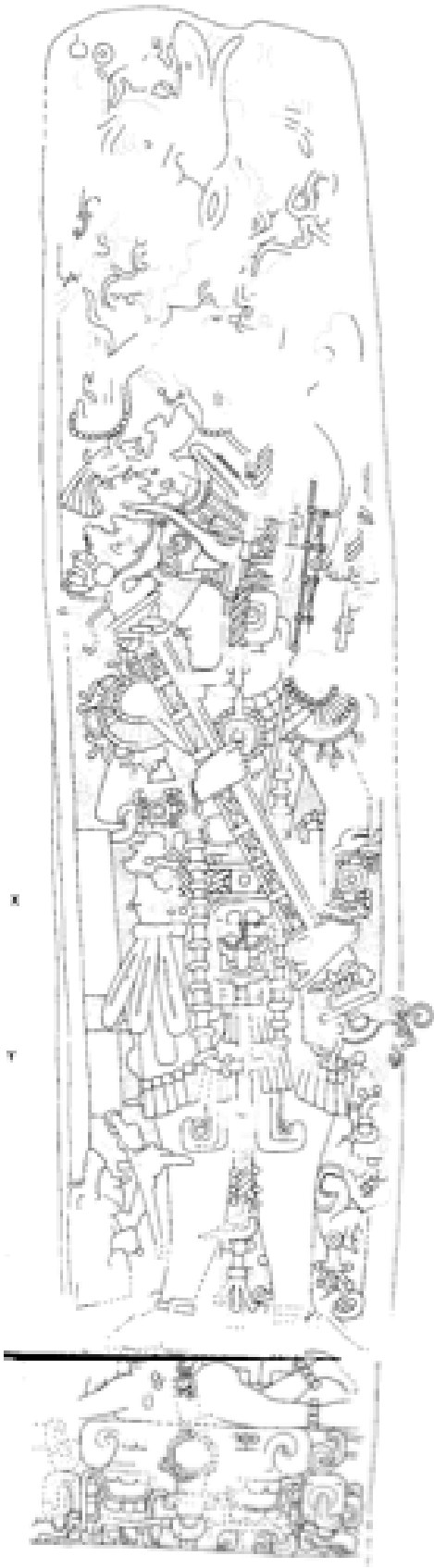


Figure 32 Stela 6, Caracol

Copyright © The Penn Museum. **Drawing** by Carl Beetz.

Location: At the base of Structure A13.

Approximate Date: 603 A.D. (9.8.10.0.0).

Composition: The ruler Knot Ajaw dressed in ritual wear and holding a ceremonial bar stands on top of an earth monster and a floating transitional figure.

The Quatrefoil: The quatrefoil adorns the forehead of the earth monster.

Sources: (Beetz and Satterthwaite 1981; Martin and Grube 2008)

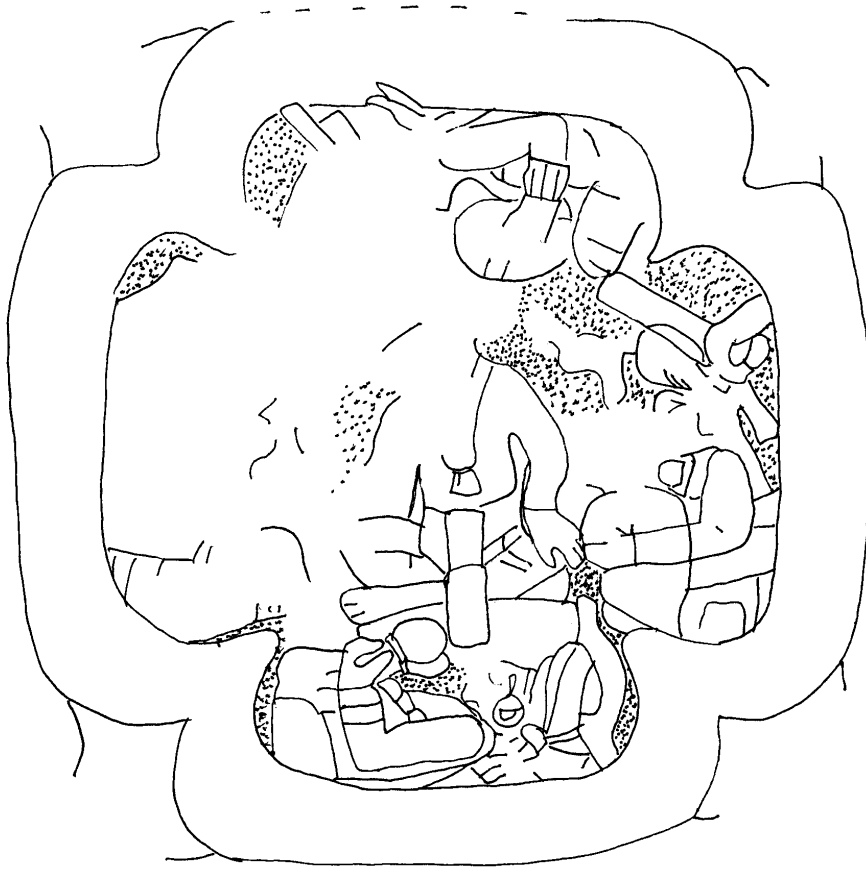


Figure 33 **Sculpture 131, Copan**

By author based off by drawing by A. Blanck, published in Baudez, C. F. *Maya Sculpture of Copan: the Iconography* (1994).

Location: The surface area south of main group plaza.

Approximate Date: Early Classic.

Composition: This monument depicts a central figure seated surrounded by four additional seated figures, one in each lobe. The figures have been previously identified as otherworldly because the four figures in each lobe hold musical instruments; however since they are wearing attendant headdresses they are more likely human. Further, I propose that the central figure is a ruler or elite.

The Quatrefoil: The quatrefoil frames the scene. There appears to be something emerging from each corner however the poor condition of the monument inhibits its identification.

Sources: (Coggins 1980; Houston, et al. 2006; Schele and Villela 1996)

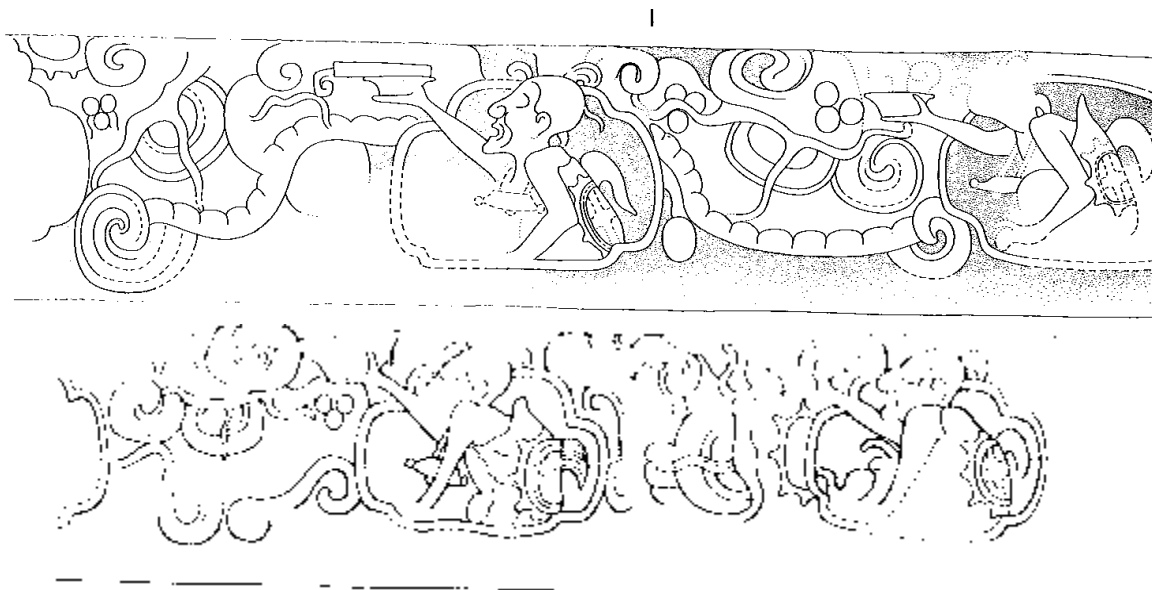


Figure 34 Altar 4, Tikal

The periphery, Copyright © The Penn Museum. Drawing by William R. Coe.

Location: A plaza.

Approximate Date: 514 A.D. (9.4.0.0.0).

Composition: This altar depicts the earth monster with four quatrefoils on the body and forming the jaws.

The Quatrefoil: Within each quatrefoil is God N (or the bacab) wearing a turtle carapace and holding a ritual object in his hand.

Sources: (Jones, et al. 1982;Looper 2003; Sharer 1978)

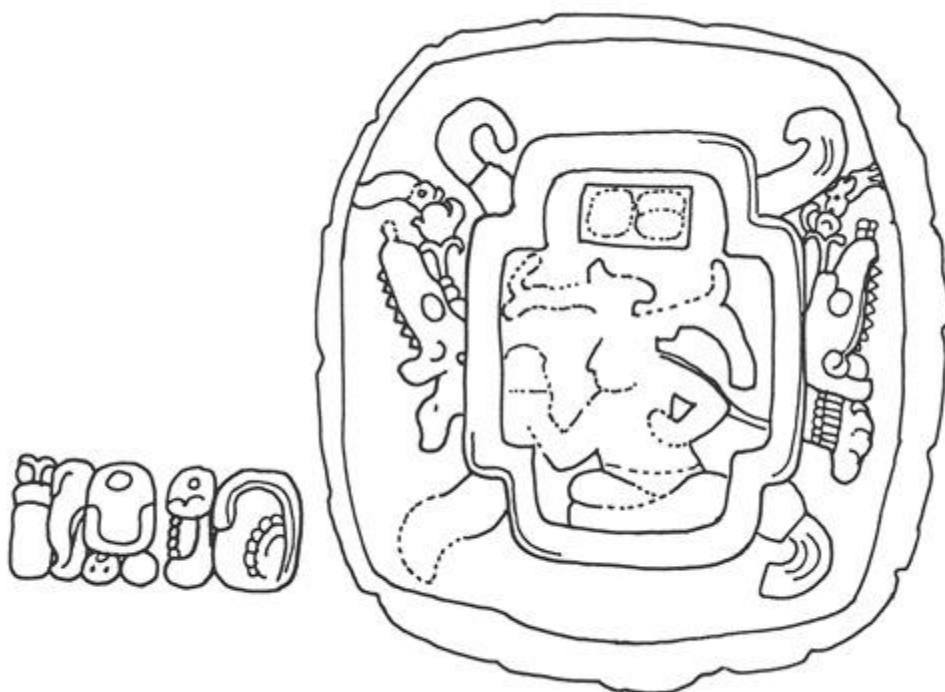


Figure 35 Altar, El Peru

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: In Plaza 4 of the main center paired with Stela 38.

Approximate Date: 749 or 801 A.D.

Composition: This monument depicts a seated figure inside the body of a double-headed saurian monster; each head is depicted wearing a water-lily headdress. While the preservation is an issue, the text indicates that the figure is celebrating the completion of his fifty-two years at the *heart of turtle*. Consequently, the figure is likely a ruler.

The Quatrefoil: The quatrefoil forms the body/shell of the turtle monster. From each corner emerge turtle fins.

Sources: (Baudez 1994; Lee personal communication; Stone 1995)

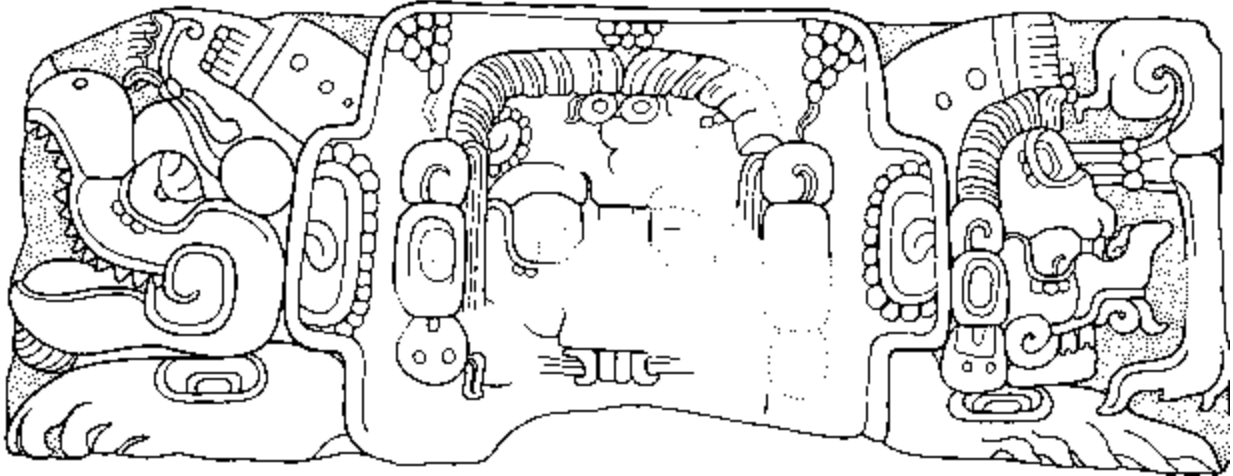


Figure 36 Altar W', Copan

Drawing by. Barbara W. Fash.

Location: In the plaza in front of a small court.

Approximate Date: 776 A.D. (9.17.5.9.4 8 Kan 12 Mol).

Composition: This altar depicts a bicephalic monster with the left head as a turtle and the right head as Chaak. The body of the monster has another head, this time facing forward. This head is likely a turtle as well and is marked with the sign for Venus on the forehead.

The Quatrefoil: The quatrefoil forms the body of the monster and frames the forward facing turtlehead. Hanging from the top of the quatrefoil are tuun signs and emerging from the upper two corners are turtle fins. The lower two corners each have the respective limb associated with the head situated above.

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)



Figure 37: Stela 10, Machaquila

Courtesy of Middle American Research Institute, Tulane University. Drawing after Graham 1967.

Location: The main plaza at the foot of Structure 17.

Approximate Date: 731 A.D. (9.15.0.0.0 5 Ahau 13 Yax).

Composition: The monument depicts a figure holding a manikin scepter standing on a complete quatrefoil. The figure's right heel is raised. Inside the quatrefoil is a giant Ahau glyph however it may rather be a crudely drawn turtle.

The Quatrefoil: The quatrefoil frames the turtle in the bottom register and has glyphs attached to the outside of each lobe.

Sources: (Clancy 2009; Graham 1967; Graham, et al. 1997; Stone 1995)

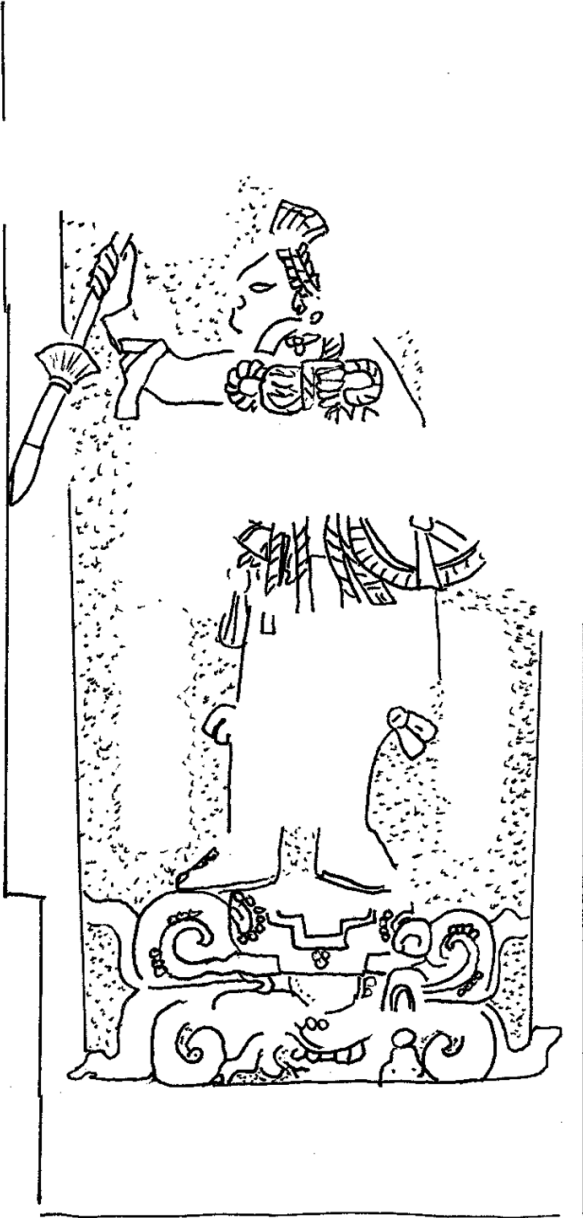


Figure 38 The North East Jamb,
Temple 18 Jamb, Copan

**Drawing by author (text excluded).
Detail from drawing by A. Dowd,
originally published in Baudez, C. F.
*Maya Sculpture of Copan: the
Iconography* (1994).**

Location: Interior decoration of Temple
18.

Approximate Date: 800 A.D.

Composition: The monument depicts a
Yax Pasaj Chan Yopaat dressed as a
warrior standing on a turtle with scrolls
on each side. The turtle appears to have a
skeletal jaw.

The Quatrefoil: The quatrefoil appears
as part of the forehead of the turtle-earth
monster.

Sources: (Baudez 1994; Houston, et al.
2006)

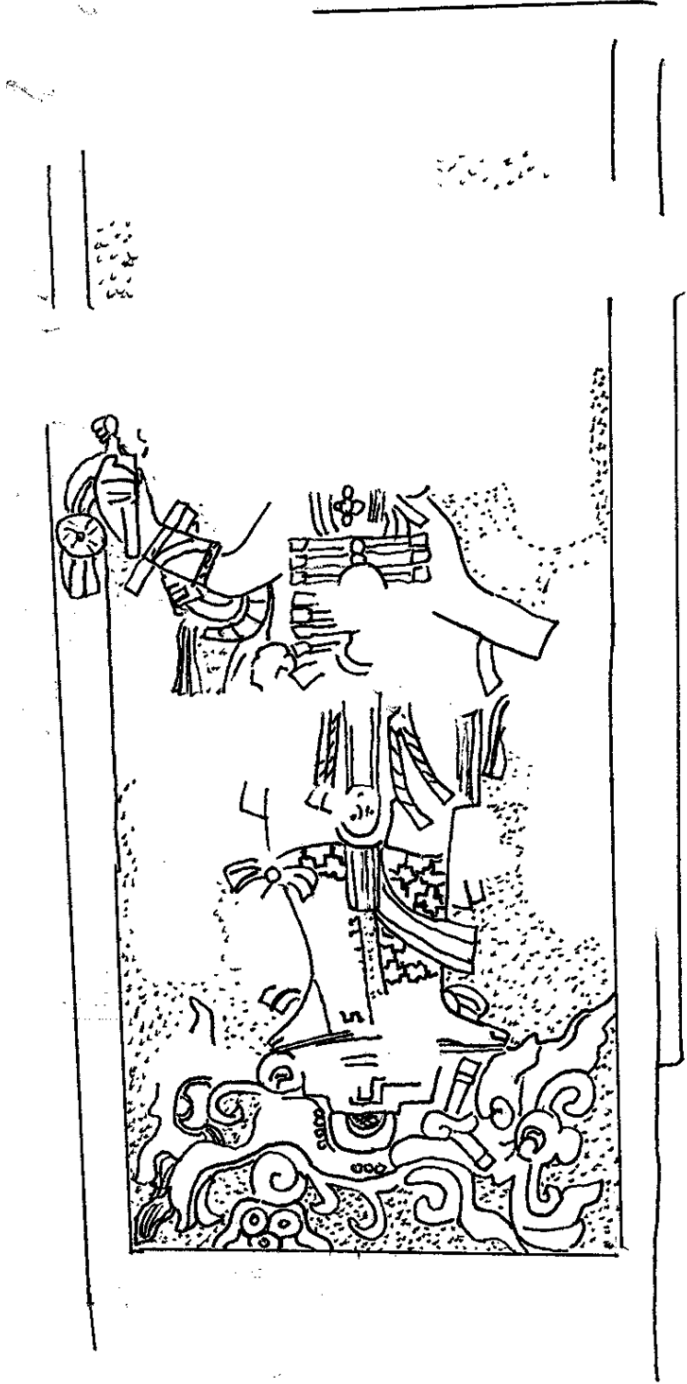


Figure 39 The North West Jamb, Temple 18, Copan

Drawing by author (text excluded). Detail from drawing by A. Dowd, originally published in Baudez, C. F. *Maya Sculpture of Copan: the Iconography* (1994).

Location: Interior decoration of Temple 18.

Approximate Date: 800 A.D.

Composition: The monument depicts a Yax Pasaj Chan Yopaat dressed as a warrior standing on a turtle earth monster with scrolls on each side. The turtle appears to have a skeletal jaw and a Venus sign attached.

The Quatrefoil: The partial quatrefoil appears on the forehead of the turtle-earth monster.

Sources: (Baudez 1994)



Figure 40 The South East Jamb, Temple 18, Copan

Drawing by author (text excluded). Detail from drawing by A. Dowd, originally published in Baudez, C. F. *Maya Sculpture of Copan: the Iconography* (1994).

Location: Interior decoration of Temple 18.

Approximate Date: 800 A.D.

Composition: The monument depicts a Yax Pasaj Chan Yopaat dressed as a warrior standing on a turtle earth monster.

The Quatrefoil: The quatrefoil forms the body of the turtle however no head is visible. Inside the quatrefoil is an Imix glyph and emerging from each corner are turtle/water lily fins.

Sources: (Baudez 1994)



Figure 41 The South West Jamb, Temple 18 Copan

Drawing by author (text excluded). Detail from drawing by A. Dowd, originally published in Baudez, C. F. *Maya Sculpture of Copan: the Iconography* (1994).

Location: Interior decoration of Temple 18.

Approximate Date: 800 A.D.

Composition: The monument depicts a Yax Pasaj Chan Yopaat dressed as a warrior standing on a turtle earth monster with scrolls on each side. The turtle appears to have a skeletal jaw.

The Quatrefoil: The partial quatrefoil frames the turtle and had two turtle/water lily fins emerging from the lower corners.

Sources: (Baudez 1994)

*Note: There are 18 “Giant Ahau altars” from Caracol of which eight depict an Ahau glyph denoting the K’atun ending date within a quatrefoil frame.

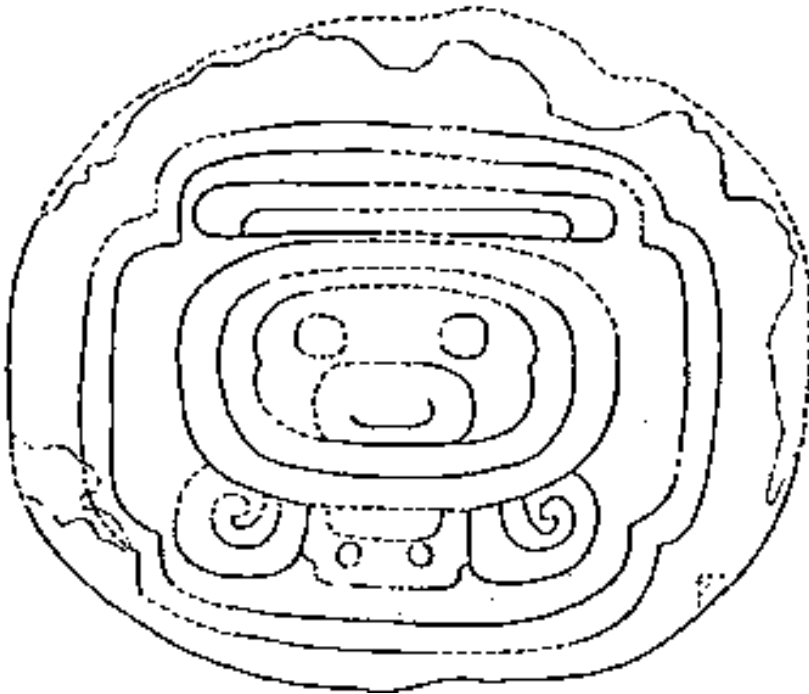


Figure 42 Altar 1, Caracol

Copyright © The Penn Museum. Drawing by Betsy Roosen.

Location: In the corridor between A1 and A2 by Structure A10.

Approximate Date: 534 A.D. (9.8.0.0.0 5 Ahau 3 Chen).

General Remarks: Dedicated by Ruler III (Yajaw Te K’inich II).

Sources: (Barrientos 2008; Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

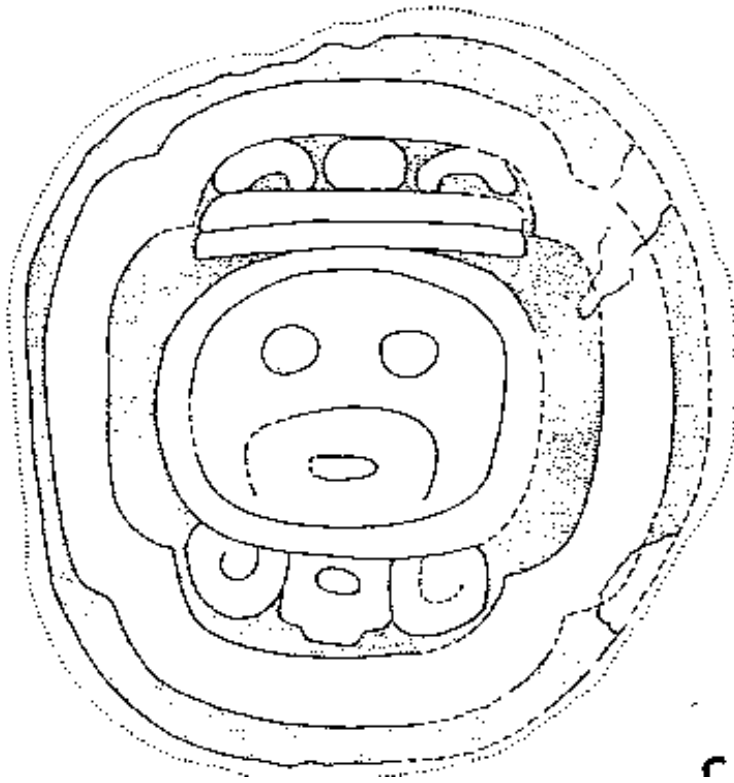


Figure 43 Altar 3, Caracol

Copyright © The Penn Museum. Drawing by Betsy Roosen.

Location: In front of Structure A1.

Approximate Date: (Corrected by Grube 1994) 534 A.D. (9.5.0.0.0 11 Ahau 18 Sek).

General Remarks: Dedicated by Ruler II.

Sources: (Beetz and Satterthwaite 1981; Grube 1994; Houston 1987; Martin and Grube 2008)

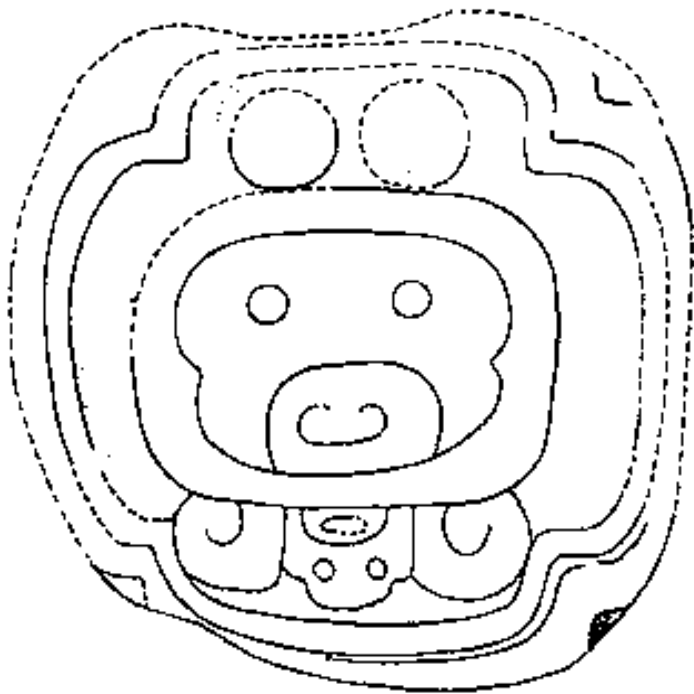


Figure 44 Altar 4, Caracol

Copyright © The Penn Museum. **Drawing** by Betsy Roosen.

Location: In the center of court A1.

Approximate Date: 495 A.D. 9.3.0.0.0 (2 Ahau 18 Muwan).

General Remarks: Dedicated by Yajaw Te' K'inich I.

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

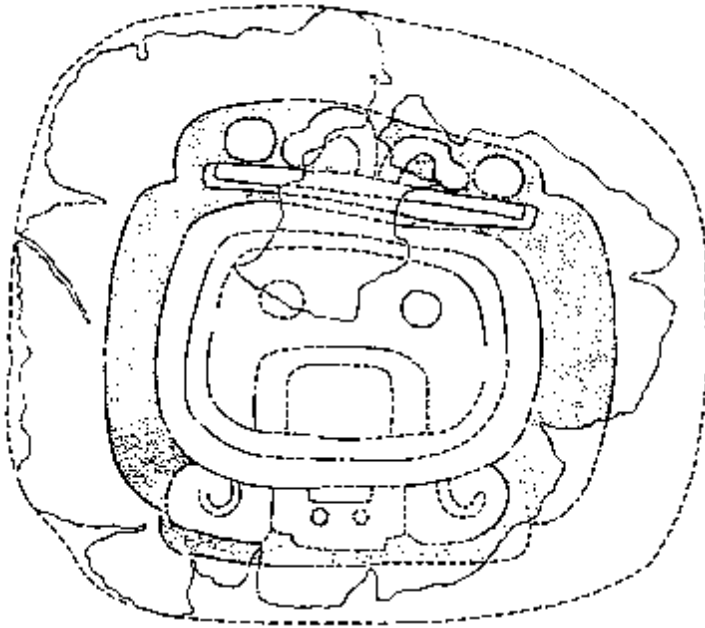


Figure 45 Altar 6, Caracol

Copyright © The Penn Museum. **Drawing by** Betsy Roosen.

Location: In the court of A1.

Approximate Date: 573 A.D. (9.7.0.0.0 7 Ahau).

General Remarks: Dedicated by Ruler III (Yajaw Te K'inich II).

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

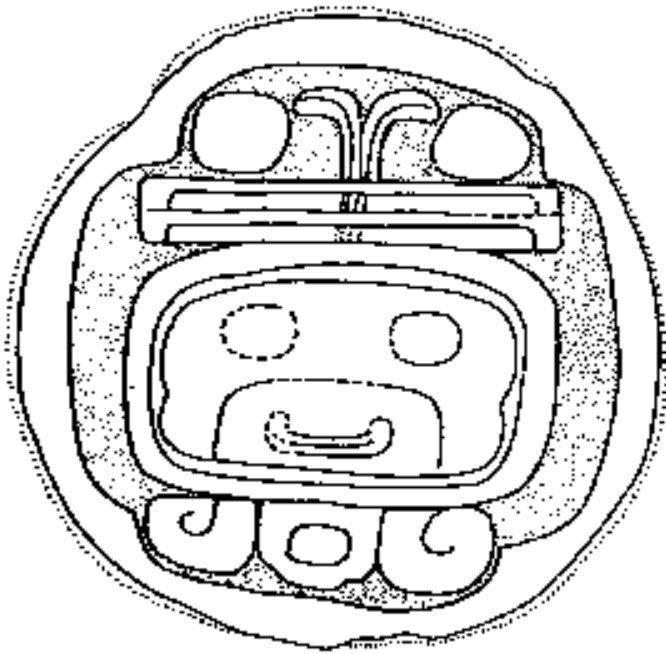


Figure 46 Altar 7, Caracol

Copyright © The Penn Museum. Drawing by Betsy Roosen.

Location: On a platform in the court of A2.

Approximate Date: 652 A.D. (9.11.0.0.0).

General Remarks: Dedicated by Ruler V (K'an II).

Sources: (Beetz and Satterthwaite 1981; Martin and Grube 2008)

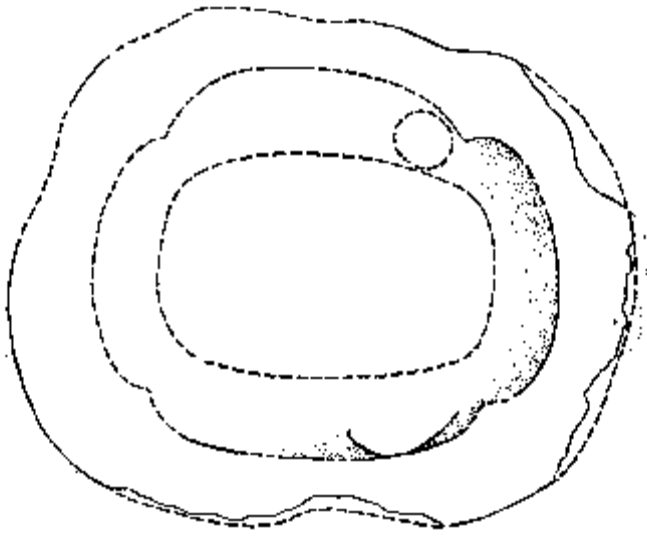


Figure 47 Altar 11, Caracol

Copyright © The Penn Museum. **Drawing by** Betsy Roosen.

Location: This altar was found resting on limestone blocks at the base of stairway B2.

Approximate Date: 613 A.D. (9.9.0.0.0 3 Ahau).

General Remarks: Dedicated by Ruler IV (Knot Ajaw).

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

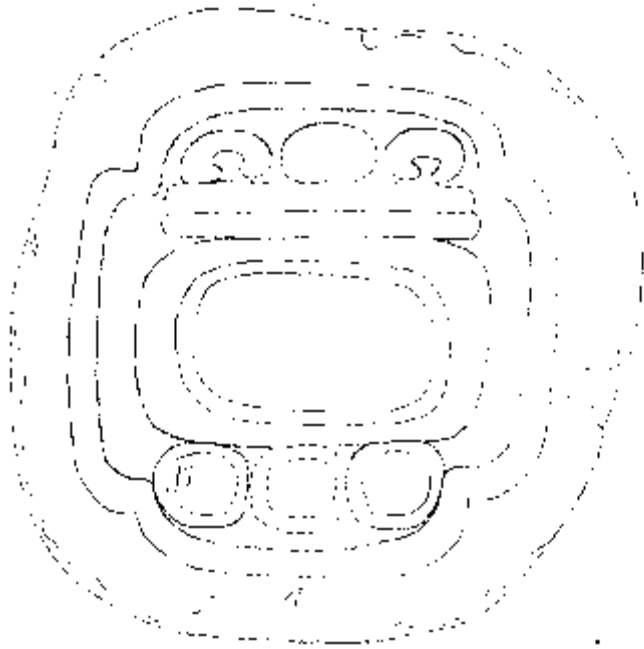


Figure 48 Altar 14, Caracol

Copyright © The Penn Museum. Drawing by Betsy Roosen.

Location: In the court of A1.

Approximate Date: 534 A.D. (9.5.0.0.0 11 Ahau 18 Sek).

General Remarks: Dedicated by Ruler II (K'an I).

Sources: (Chase 1985; Martin and Grube 2008)

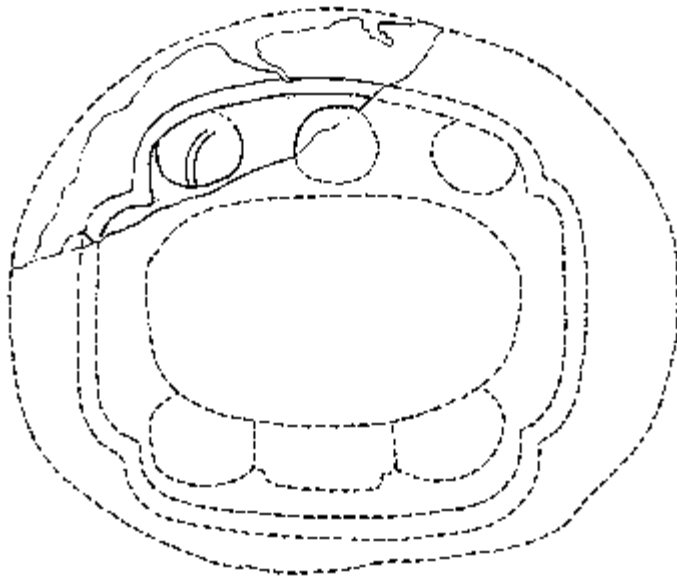


Figure 49 Altar 15, Caracol

Copyright © The Penn Museum. **Drawing** by Betsy Roosen.

Location: In the court of A1.

Approximate Date: 613 A.D. (9.9.0.0.0 3 Ahau).

General Remarks: Dedicated by Ruler IV (Knot Ajaw).

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

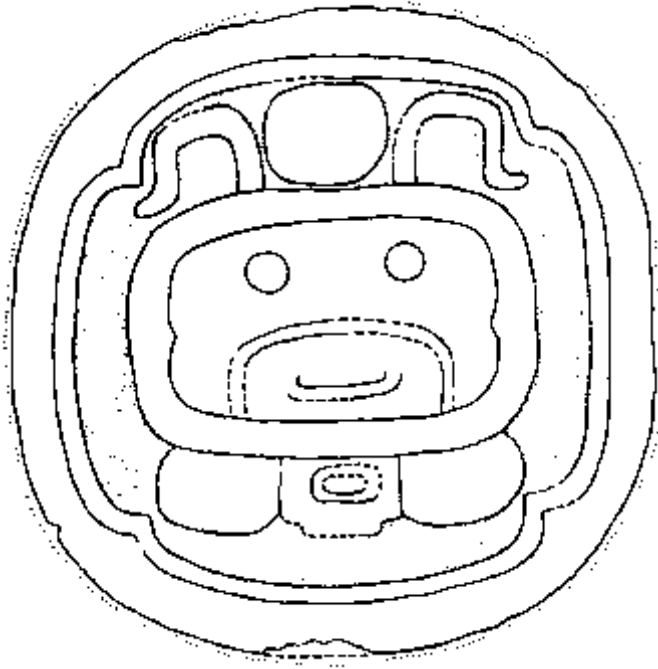


Figure 50 Altar 19, Caracol

Copyright © The Penn Museum. Drawing by Betsy Roosen.

Location: In the court of A1.

Approximate Date: 633 A.D. (9.10.0.0.0).

General Remarks: Dedicated by K'an II.

Sources: (Beetz and Satterthwaite 1981; Houston 1987; Martin and Grube 2008)

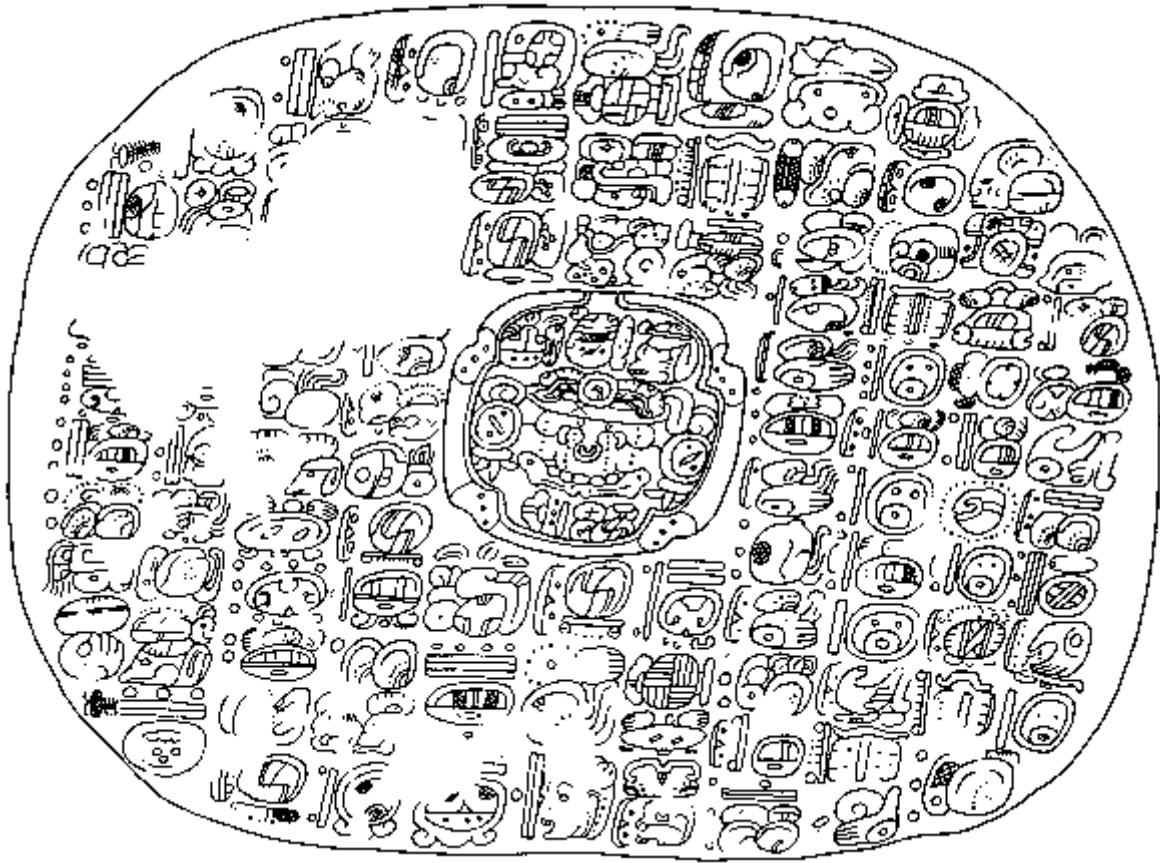


Figure 51 Altar 1, Naranjo

Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions, Vol. 2, Part 2, Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Location: Unknown, however text indicates it was paired with Stela 38 located in the plaza south of Structure D-1.

Approximate Date: 593 A.D.

Composition: This monument depicts a monster face surrounded by glyphs. On this monument Ruler Chan-K'inich places himself as 35th in the line of the founder. The text refers to parentage statements and a conflict in 544 and may also refer to the founding deity of Naranjo.

The Quatrefoil: The quatrefoil taking the form of a skeletal jaw frames the monster face in the middle.

Sources: (Clancy 2009; Graham 1967; Graham, et al. 1997; Stone 1995)



Figure 52 Panel 3, Cancuen

By author (text excluded). Detail from drawing by Luis Fernando Luin, Cancuen Archaeological Project.

Location: The platform of Structure M7-1 part of the western building of the East Ballcourt.

Approximate Date: 795 A.D. (9.18.5.0.0 4 Ajaw 13 Ceh).

Composition: The panel depicts three figures: the center figure is the largest and is depicted seated on a water lily monster and wearing a water lily headdress, the two other figures, both smaller in size, are placed on each side in a kneeling position.

The Quatrefoil: The image is framed with a quatrefoil lined with crosshatched water dots and with a water lily sprouting from each of the four corners.

Sources: (Barrientos 2008)

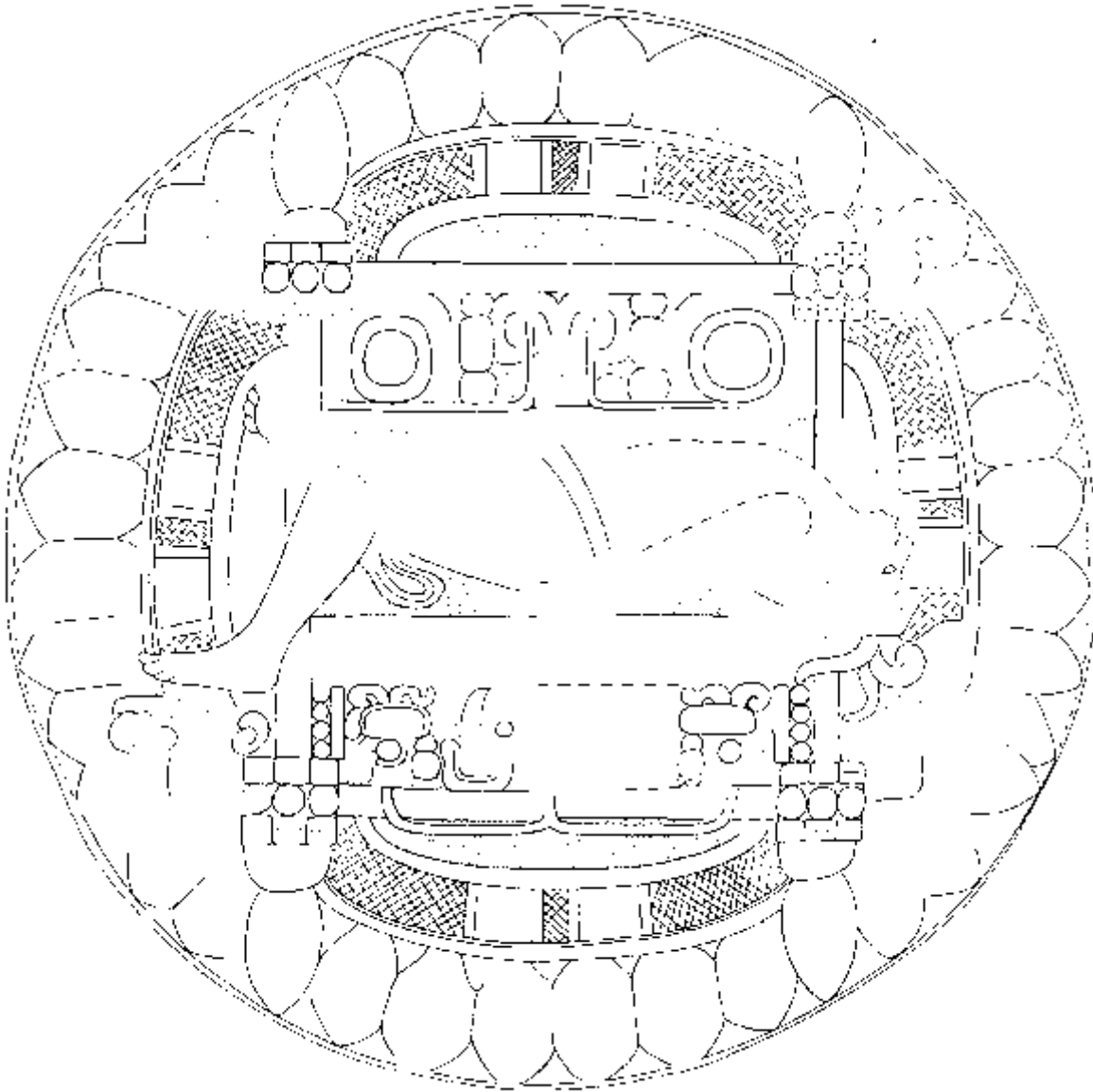


Figure 53 Altar 10, Tikal

Copyright © The Penn Museum. Drawing by William R. Coe.

Location: The enclosure of twin pyramid Q complex.

Approximate Date: 771 A.D. (9.17.0.0.0 13 Ajaw 18 Kamk'u).

Composition: The altar dedicated by Yax Ayin II (Ruler C), often illustrated upside down, depicts two layers. The bottom layer is a quatrefoil surrounded by petals. The top layer is a bound captive lying on his back placed on a palanquin. Together, the altar depicts a captive floating above a quatrefoil portal.

The Quatrefoil: The quatrefoil appears open and is lined with cross-hatching.

Sources: (Jones, et al. 1982; Scarborough 1998; Spero 1986; Stone 1995)

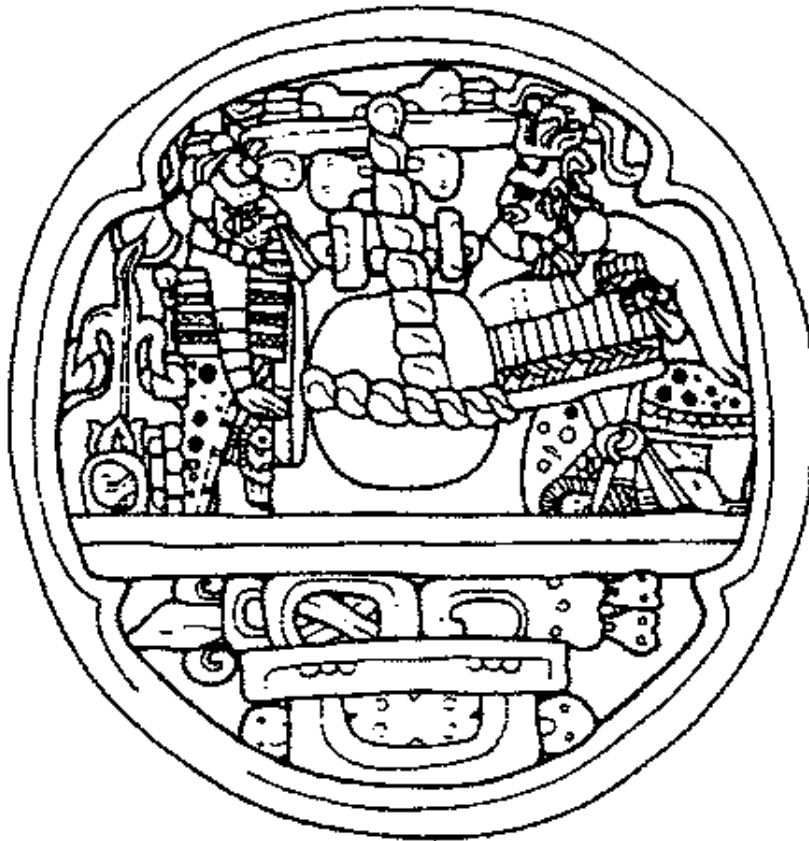


Figure 54 The North Ball Court Marker, Ball Court Marker, Copan

Drawing by Dr. Barbara W. Fash.

Location: In ballcourt A11B.

Approximate Date: 730 A.D.

Composition: Constructed by 18 Rabbit this marker depicts two figures on either side of a ball tied by a rope to a horizontal double band marked with bones and kin signs. Below the figures are crossed-bands, a shell and a kin sign. The right figure is dressed as a ball player and is kneeling thereby paying homage to the left figure. The left figure is also dressed as a ball player. This marker is interpreted as the prologue to the ball game depicting an event in the underworld where a creature of the underworld along with death revived a tribute.

The Quatrefoil: The quatrefoil frames the entire scene.

Sources: (Baudez 1994)

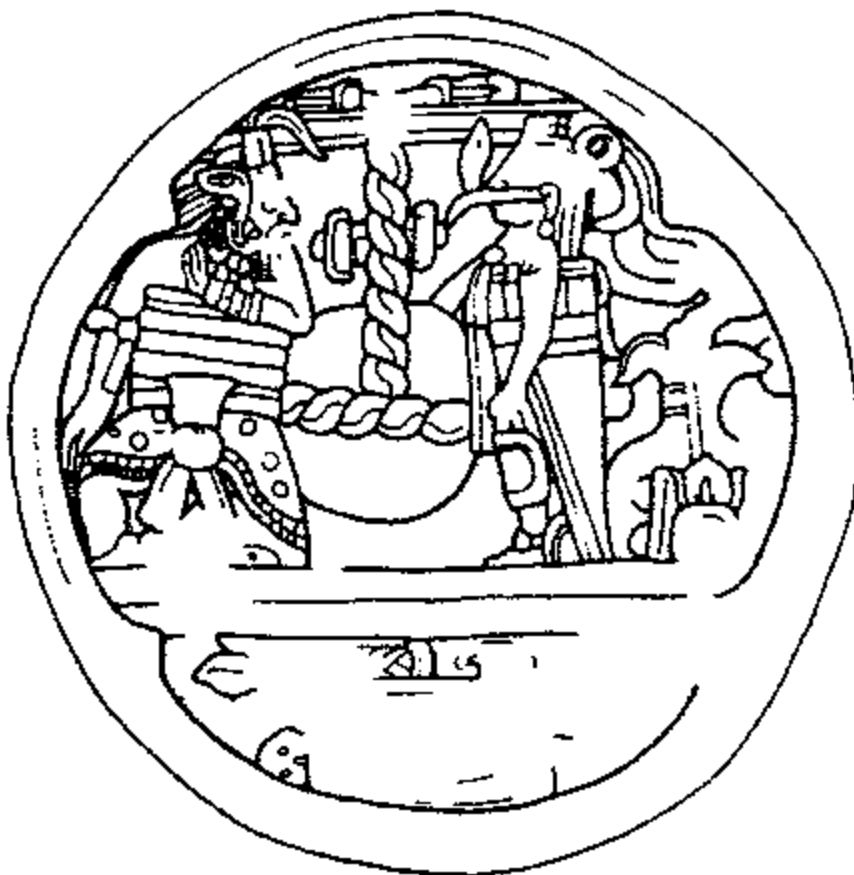


Figure 55 The Center Ball Court Marker, Ball Court Marker, Copan

Drawing by Dr. Barbara W. Fash.

Location: In ballcourt A11B.

Approximate Date: 730 A.D.

Composition: Constructed by 18-Rabbit this marker depicts two figures enclosed within a quatrefoil, with a kin sign, a shell and crossed-bands in the lower part. Each figure has one knee on the ground. The ball is in the middle, stuck to the chest of the left figure and incised with a Kan cross, two glyphs, and a cauac sign. The left figure is alive whereas the right figure is dead. Both figures are dressed in ball game outfits; however the right figure is dressed slightly differently. In addition, the right figure has three additional heads attached to the body. The central marker is interpreted as showing 18-Rabbit in the action the ball game against the dead lord.

The Quatrefoil: The quatrefoil frames the entire scene.

Sources: (Baudez 1994; Martin and Grube 2008)



Figure 56 The South Ball Court Marker, Ball Court Marker, Copan

Drawing by Dr. Barbara W. Fash.

Location: In ballcourt AIIB.

Approximate Date: 730 A.D.

Composition: Constructed by 18 Rabbit this marker depicts two figures enclosed within a quatrefoil, with a kin sign, a shell and crossed-bands in the lower part. Ball hangs from the center toed to a rope attached to a horizontal double band. The left figure is on a knee to show respect, dressed as a ball player with a feline face and rabbit ear. The right figure has the glyph for 7 and a youth's face. These ballcourt markers were constructed under 18 Rabbit. This marker is interpreted as depicting the outcome of the ballgame, showing tow players from 18-Rabbits team. One figure is an underworld player and the other is personified maize.

The Quatrefoil: The quatrefoil frames the entire scene.

Sources: (Baudez 1994; Martin and Grube 2008)

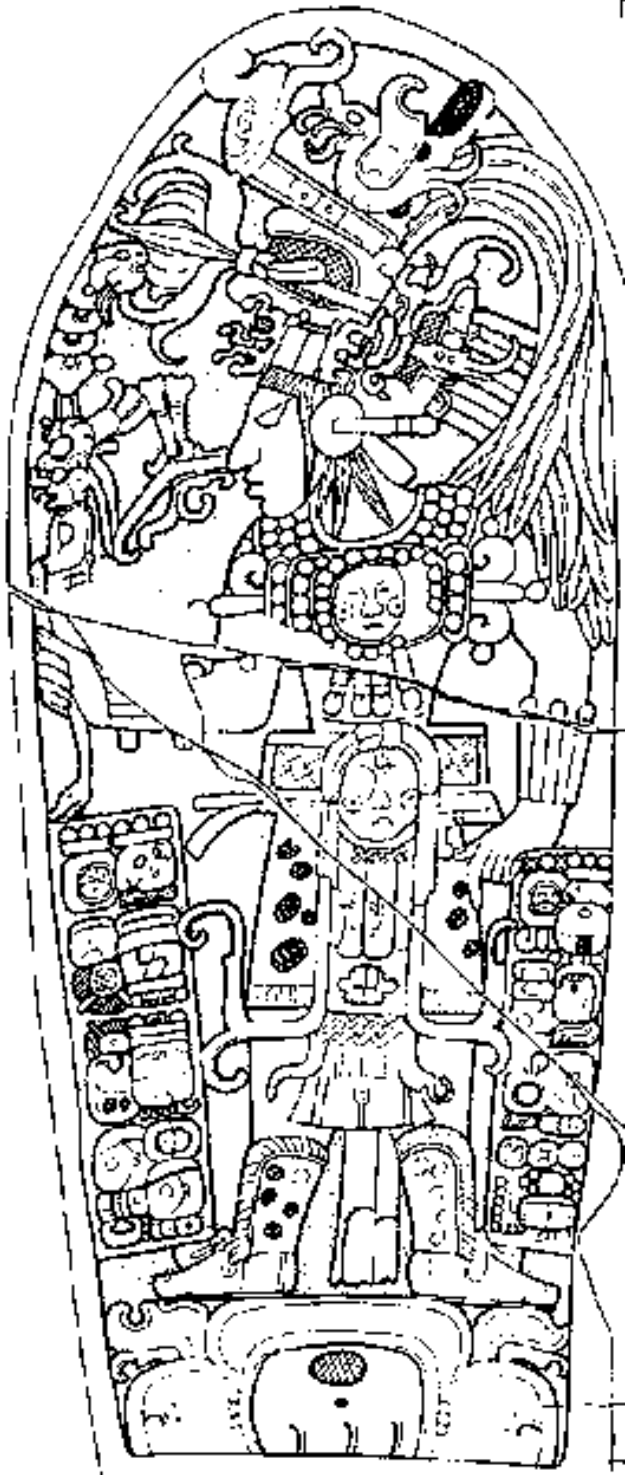


Figure 57 Stela 4, Machaquila

Courtesy of Middle American Research Institute, Tulane University. Drawing after Graham 1967.

Location: The main plaza.

Approximate Date: 820 A.D. (9.19.10.0.0 8 Ahau 8 Xul).

Composition: This monument depicts a ruler holding a manikin scepter and wearing a water lily headdress standing on top of a partial quatrefoil/water lily.

The Quatrefoil: The quatrefoil is marked with a cross hatched Imix glyph.

Sources: (Love and Guernsey 2007)

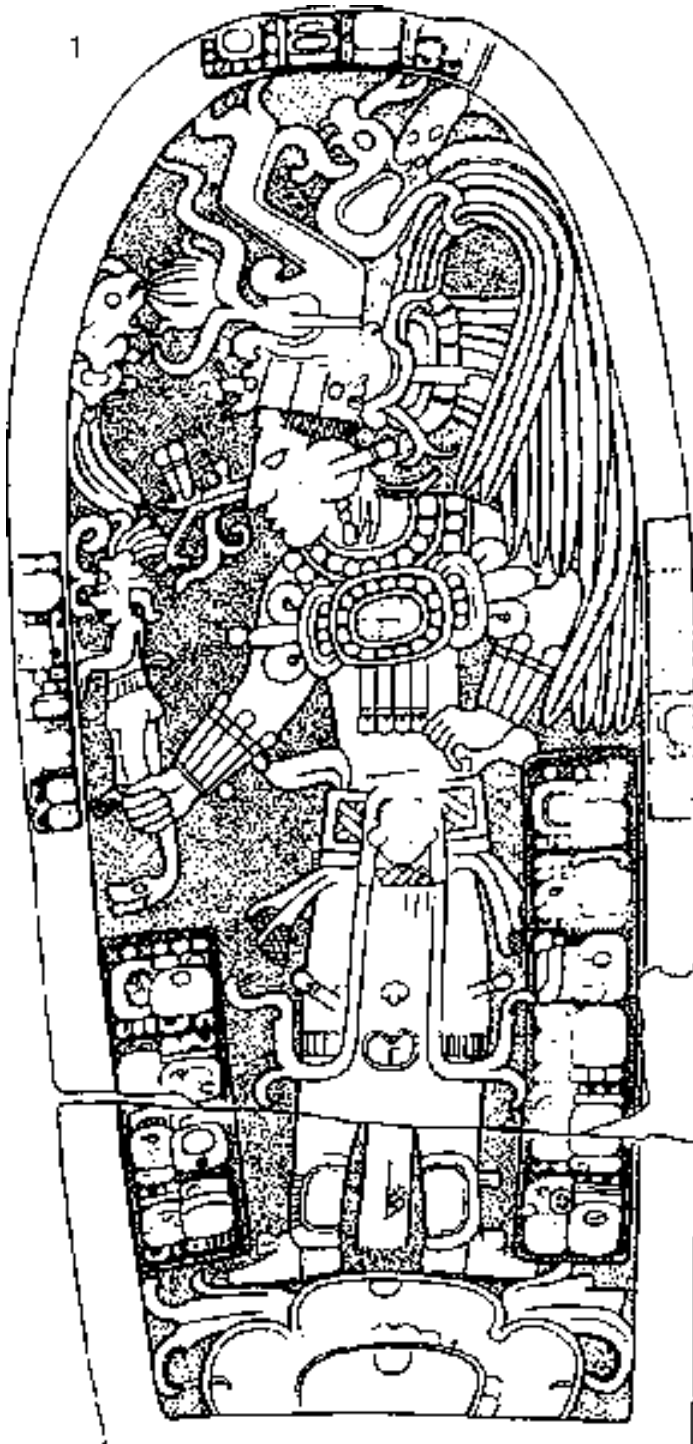


Figure 58 Stela 8, Machaquila

Courtesy of Middle American Research Institute, Tulane University. Drawing after Graham 1967.

Location: The main plaza.

Approximate Date: 825 A.D.

(9.19.15.0.0 1 Ahau 3 Tzec).

Composition: This monument depicts a ruler holding a manikin scepter and wearing a water lily headdress standing on top of a partial quatrefoil/water lily.

The Quatrefoil: The quatrefoil is very similar to Stela 4 and probably contains a hatched Imix glyph.

Sources: (Clancy 2009; Graham 1967; Graham, et al. 1997; Stone 1995)

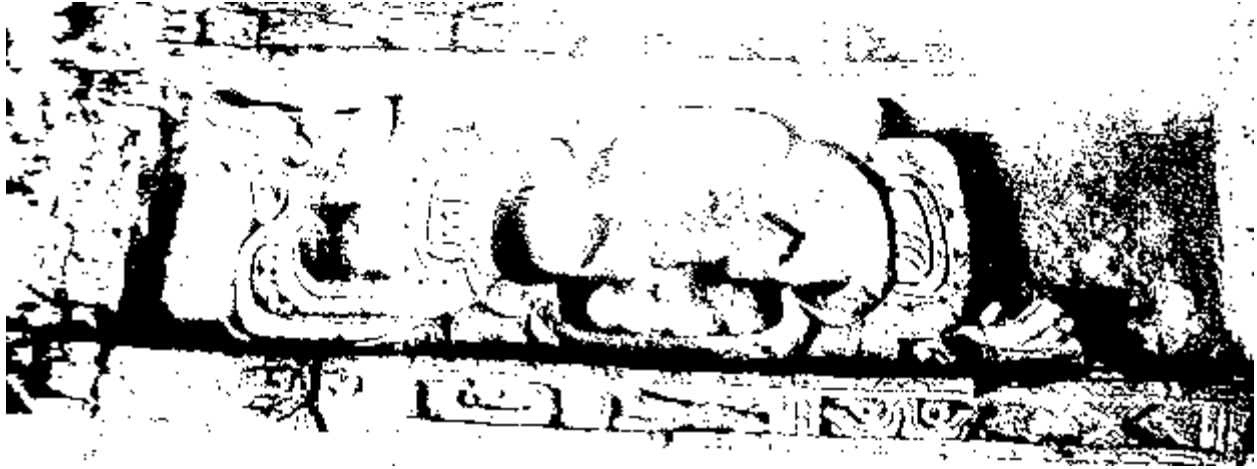


Figure 59 Temple of the Cross East Sanctuary Roof, Palenque

Copyright Merle Green Robertson, 1976.

Location: The eastern roof of the Temple of the Cross.

Approximate Date: 692 A.D.

Composition: The sculpture dedicated by Kan Bahlam depicts a bust of a human figure inside a quatrefoil cartouche with water lilies emerging from each side. A sky band and serpents frame the quatrefoil and figure.

The Quatrefoil: The quatrefoil frames the human figure.

Sources: (Martin and Grube 2008)

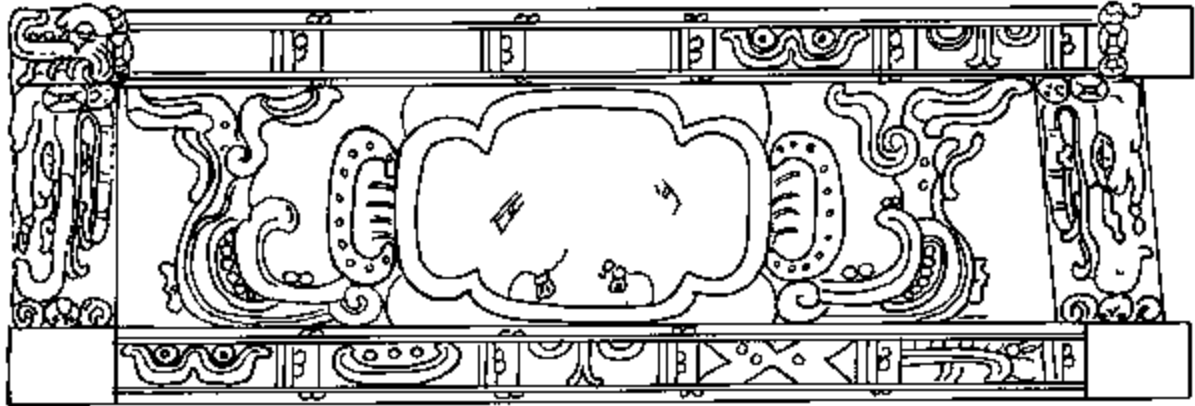


Figure 60 Temple of the Cross West Sanctuary Roof, Palenque

Copyright Merle Green Robertson, 1976.

Location: The roof of the Temple of the Cross.

Approximate Date: 692 A.D.

Composition: The sculpture dedicated by Kan Bahlam depicts a bust of a human figure inside a quatrefoil cartouche with water lilies emerging from the left and right sides. A sky band and serpents frame the quatrefoil and figure.

The Quatrefoil: The quatrefoil frames the human figure.

Sources: (Baudez 1993; Martin and Grube 2008; Robertson 1991)

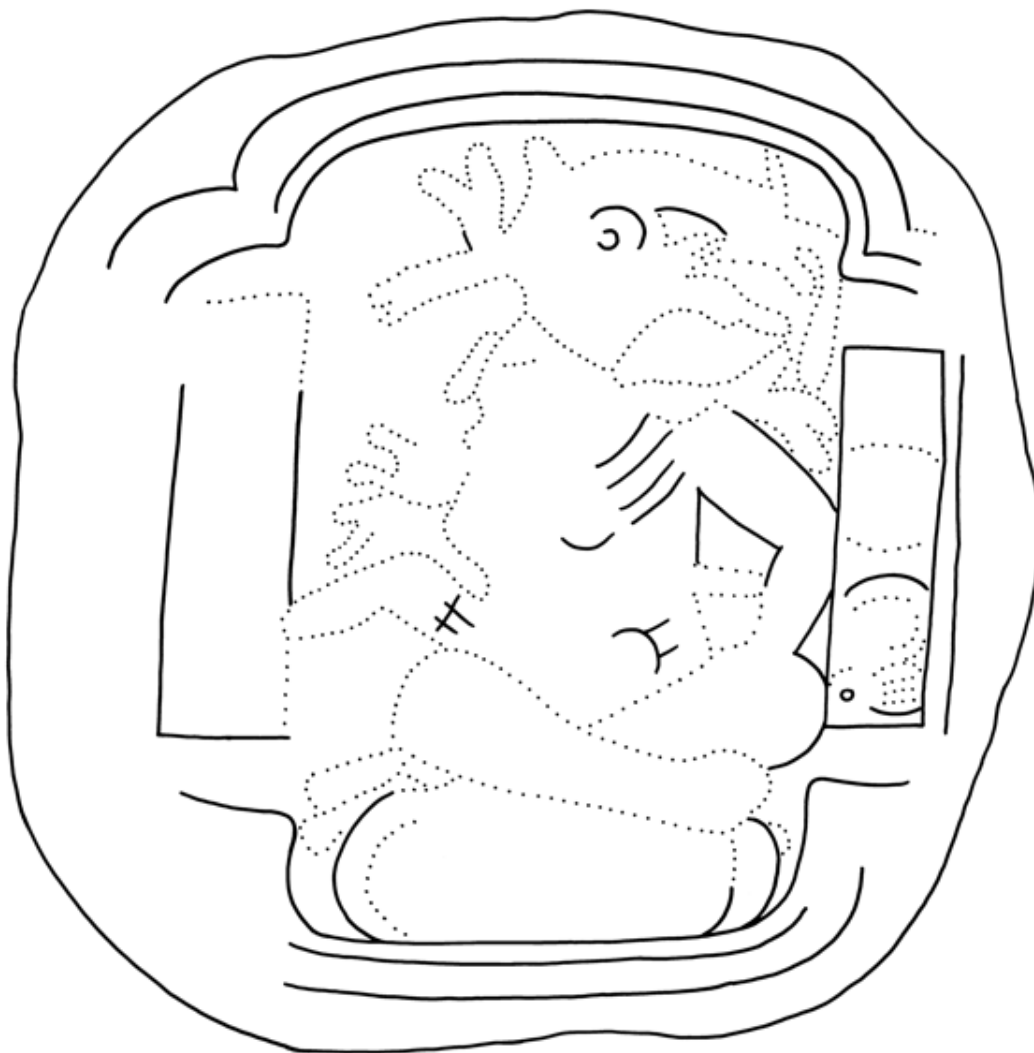


Figure 61 Altar R, Quirigua

Image courtesy of Dr. MatthewLooper.

Location: Out of context in front of Structure 1B-6 however supposed to go with Ballcourt 1B-sub 4.

Approximate Date: Late Classic.

Composition: This altar is badly eroded however it appears to depict a figure sitting cross-legged on oval object within a quatrefoil cartouche. The figure has been identified as otherworldly and the Maize deity, however there is the possibility that it was a ruler.

The Quatrefoil: The quatrefoil frames the scene.

Sources: (Clancy 2009; Guernsey 2010; Looper 2003; Martin and Grube 2008)



Figure 62 Altar Q, Quirigua

Image courtesy of Dr. Matthew Loper.

Location: Out of context in front of Structure 1B-6 however supposed to go with Ballcourt 1B-sub 4.

Approximate Date: Late Classic.

Composition: This altar depicts a figure sitting cross-legged on a throne composed of a lunar glyph for the back and a bundled object with a tuun sign for the base. The figure has been identified as otherworldly and the Maize deity, however there is a the possibility that it was a ruler.

The Quatrefoil: The quatrefoil frames the scene. Emerging from the corners was vegetation sprouts (previously identified as centipedes).

Sources: (Brady and Stone 1986; Loper 2003; Sharer 1978)



Figure 63 Stela 2, Tres Islas

Photograph by author.

Location: The stela was located in a small plaza in the Stela and Altar Group.

Approximate Date: 475 A.D.

Composition: The monument depicts a series of dates and a figure situated above earth signs and motifs. The lower half has a quaterfoil frame, however the details are not discernable due to the poor condition of the monument.

The Quaterfoil: The quaterfoil appears to be a frame.

Sources: (Martin and Grube 2008)

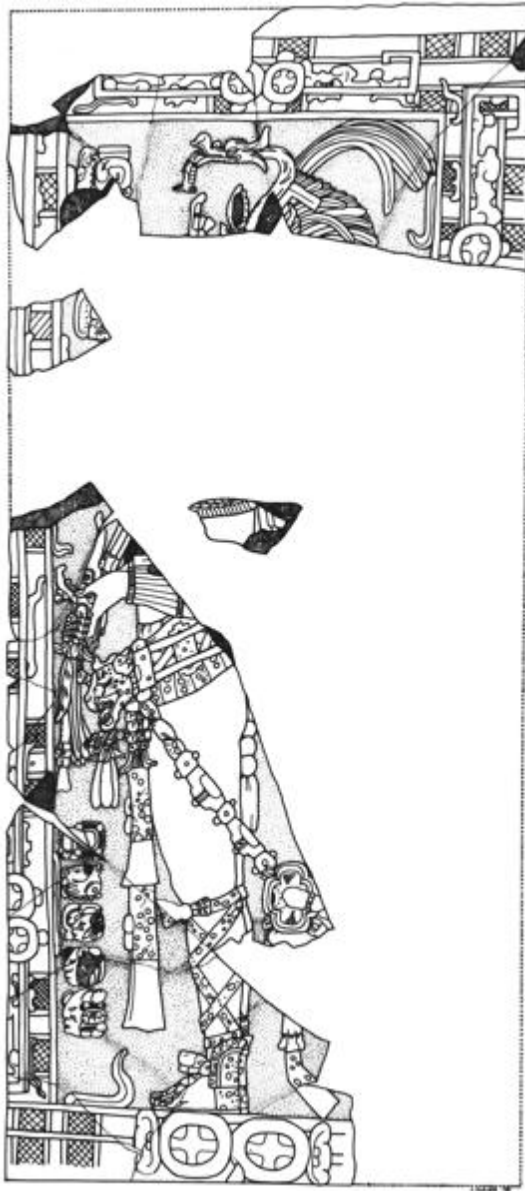


Figure 64 South Jamb, Temple of the Foliated Cross, Palenque

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The south sanctuary jamb from the Temple of the Foliated Cross.

Approximate Date: Late Classic (694-702 A.D.)

Composition: The panel depicts Kan B'alam presenting a ceremonial blood-letter. Attached to his costume is an umbilical cord hanging from his belt.

The Quatrefoil: Attached to the end of the cord is a quatrefoil marked with tuun sign and a deity, perhaps Chaak, hanging with one arm loped through the quatrefoil.

Sources: (Bassie-Sweet 1991; Robertson 1991)

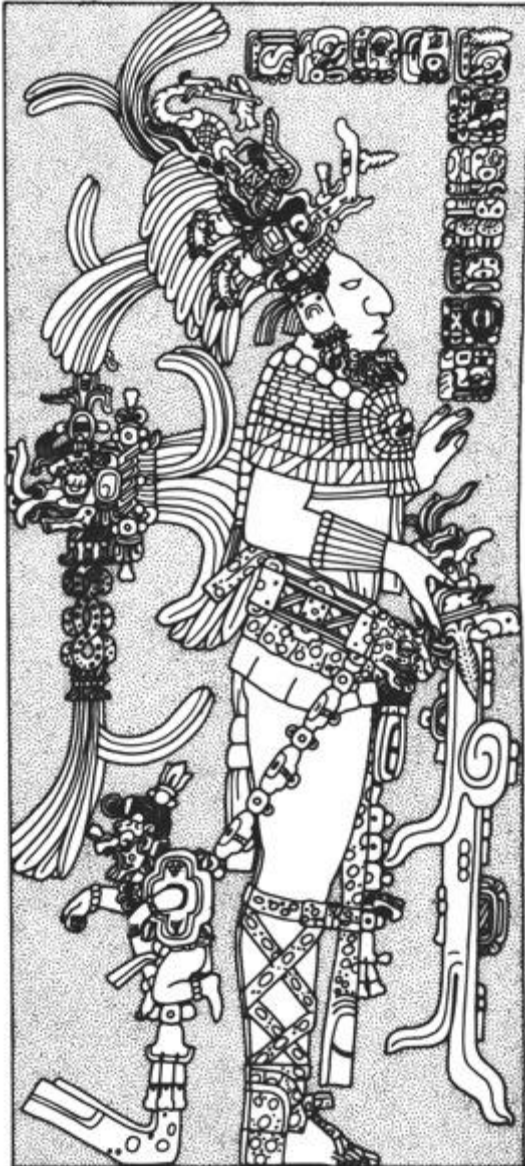


Figure 65 West Jamb, Temple of the Cross Jamb, Palenque

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: West jamb for the Temple of the Cross.

Approximate Date: Late Classic (694-702 A.D.).

Composition: The panel depicts Kan B'alam presenting a ceremonial blood-letter. Attached to his costume is an umbilical cord hanging from his belt.

The Quaterfoil: Attached to the end of the cord is a quaterfoil marked with tuun sign and a deity, perhaps Chaak, hanging with one arm loped through the quaterfoil.

Sources: (Robertson 1991)



Figure 66 Stela 1, Bonampak

Image courtesy of Dr. Peter Mathews.

Location: A Plaza.

Approximate Date: 780 A.D.
(9.17.10.0.0 12 Ahau 8 Pax).

Composition: This monument depicts ruler Chaan-Muan dressed in warrior garb standing on top of an earth monster.

The Quatrefoil: The quatrefoil appears as a cleft in the forehead of the earth monster from which a personage, likely the maize deity, emerges.

Sources: (Mathews 1978)



Figure 67 Pacal Sarcophagus Cover, Palenque.

Drawing by Linda Schele © David Schele, courtesy of Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The tomb within the Temple of the Inscriptions.

Approximate Date: 683 A.D.

Composition: The cover has the portrait of Pacal either falling or emerging into the jaws of the earth monster. The world tree emerges from center. Along the left and right border are Six portraits of deceased figures inside of partial quatrefoils and on the north and south borders are sky bands.

The Quatrefoil: The portraits inside of the partial quatrefoils are identified as (1) the central figure on the south border “New Sky” (2) the west head on the south border “8 Cauac” (3) the central figure on the north border “Great Sky” (4) the west figure on the north border “8 Cauac” (5) and the north and south borders east head as the same person.

Sources: (Robertson 1991)

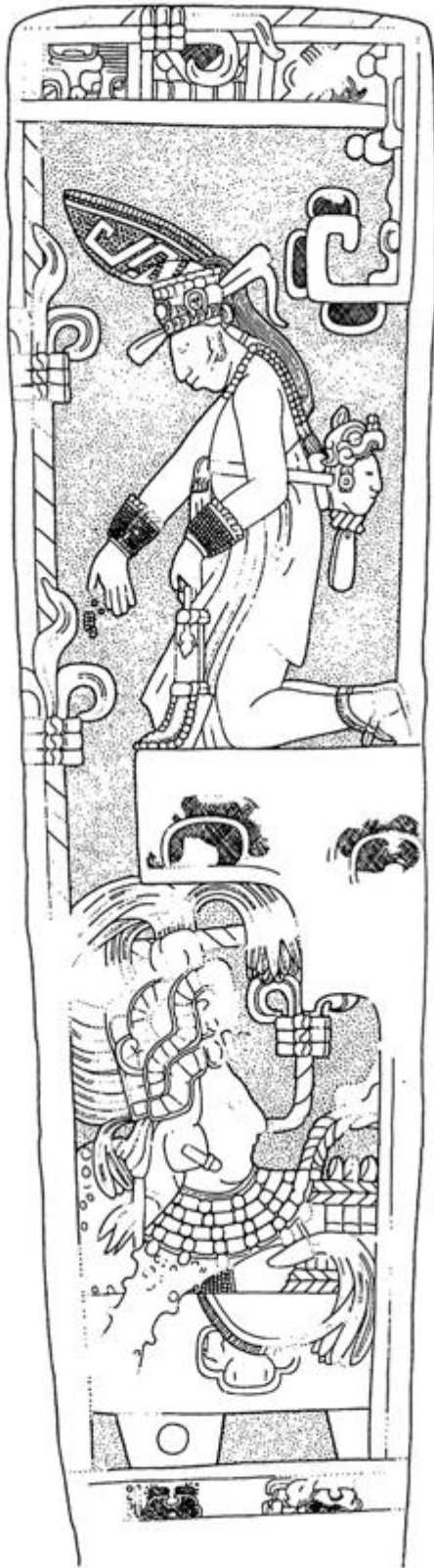


Figure 68 Stela 40, Piedras Negras

© Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org

Location: The terrace in front of Structure J-3.

Approximate Date: 746 A.D. (9.15.15.0.0 9 Ahaw 18 Xul).

Composition: This stela depicts a Ruler 4 conducting a scattering event into a psychoduct that leads to a subterranean partial quatrefoil chamber where another figure resides. The upper part of the lower figure is visible and appears to be emerging from a throne.

The Quatrefoil: The partial quatrefoil represents an otherworld locale, although other interpretations have been suggested. In addition the throne has a quatrefoil in the center.

Sources: (Clancy 2009; Martin and Grube 2008)

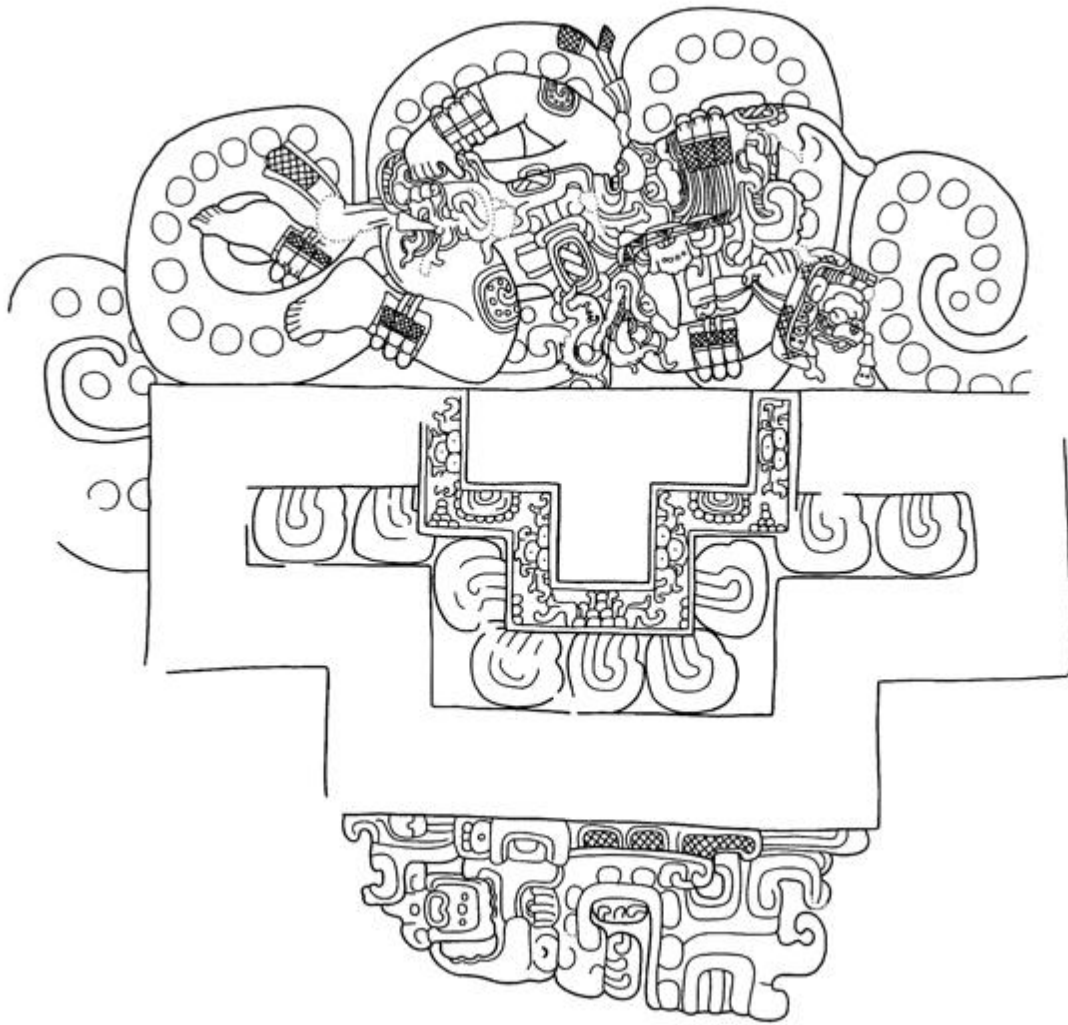


Figure 69 Monument 23, Quirigua

Image courtesy of Dr. MatthewLooper (text excluded).

Location: In the ballcourt plaza.

Approximate Date: 790 A.D. (9.18.5.0.0).

Composition: The monument, the Altar of Zoomorph P, depicts a figure lying on top of two partial quatrefoils, one within the other. The figure has been identified as Ruler Sky Xul dressed as the lightning warrior or as a transitional figure.

The Quatrefoil: The quatrefoils have celestial and earth elements within.

Sources: (Brady and Stone 1986; Looper 2003; Sharer 1978; Wilson-Mosley, et al. 2010)

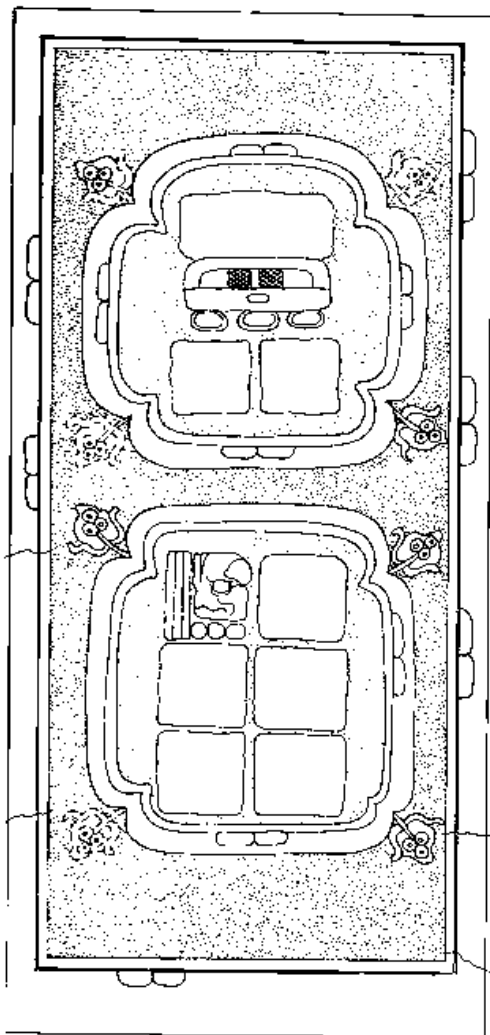


Figure 70 Pier A, Temple of the Sun, Palenque.

Copyright Merle Green Robertson, 1976.

Location: East façade of the Temple of the Sun.

Approximate Date: 5 Eb 5 Kayab (Late Classic).

Composition: On this monument are two quatrefoil cartouches. The upper has three glyphs within forming the start of an ISIG. The lower cartouche had six glyphs however only one is visible composed of three bars, a bat head variant, and three dots.

The Quatrefoil: The quatrefoil frames have water lilies marked with the Venus sign emerging from each corner.

Sources: (Baudez 1993; Martin and Grube 2008; Robertson 1991)

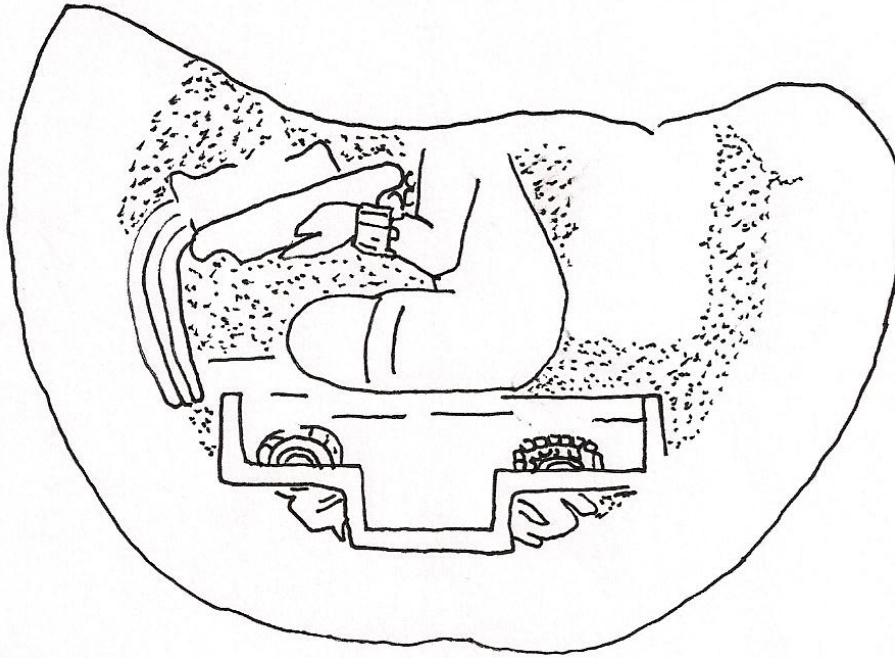


Figure 71 Monument 135

Drawing by author (text excluded). Detail after Graham, Online Corpus of Maya Hieroglyphic Inscriptions.

Location: The platform in front of Structure H6-1.

Approximate Date: 723 A.D.

Composition: This monument dedicated by K'inich-ich'aak Chapaat depicts a figure holding a bowl and stingray spine seated on a partial quatrefoil within a circular frame.

The Quatrefoil: The partial quatrefoil has water elements emerging from the lower corners.

Sources: (Martin and Grube 2008)

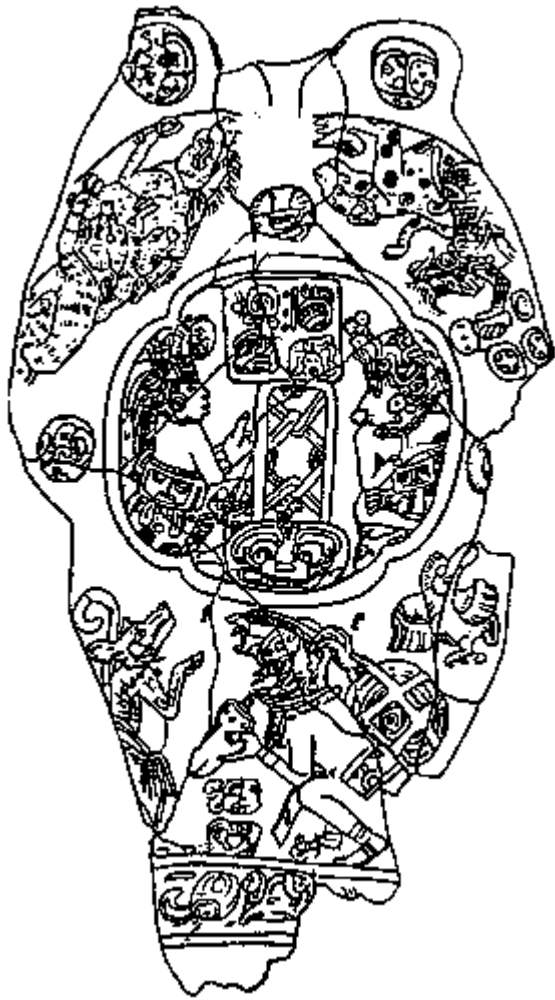


Figure 72 The Peccary Skull, Copan

Drawing by Dr. Barbara W. Fash.

Location: Within Tomb 1 from Copan.

Approximate Date: 633 A.D. (9.10.0.0.0 1 Ahau 8 Kayab).

Composition: Carved in bone, this skull depicts two seated figures facing each other. They are separated by a column composed from top down of a square glyph block, a stela with tuun signs, and a zoomorphic altar. The scene has been interpreted as supernatural on outside and human on the inside. The figures were celebrating a katun-ending rite. Interestingly the text refers back to an earlier katun completion on 8.17.0.0.0.

The Quatrefoil: The quatrefoil frames the scene separating the otherworldly beings from the human world figures inside.

Sources: (Fash 1994; Houston, et al. 2006; Love and Guernsey 2007)

APPENDIX C: IMAGE PERMISSION I



Middle American Research Institute
Publication Agreement

This agreement is made on

In consideration of the mutual promises set forth herein and of the funds \$ to be paid to The Middle American Research Institute of Tulane University by ("Licensee") as set forth herein below, The Middle American Research Institute and the Licensee do hereby agree as follows:

1. The Middle American Research Institute hereby grants to the Licensee a limited license to use the following materials:

Machaquila Stela 4 page 71, Figure 51
Machaquila Stela 7 page 78, Figure 57
Machaquila Stela 8 page 80, Figure 59
Machaquila 10 page 83, Figure 61
From: Archaeological excavations in El Peten, Guatemala. Amor I. Brainer

2. The Licensee hereby agrees to use the above-described materials exclusively for the following purposes and for no other purpose whatsoever without first obtaining the written permission of The Middle American Research Institute:

Master's Thesis: The Center and the Periphery: New Perspectives on the Quatrefoil in Classic Maya Iconography
Expected date: December, 2011

3. The Licensee hereby agrees to give appropriate credit to The Middle American Research Institute:

Courtesy of the Middle American Research Institute, Tulane University

4. The Licensee hereby agrees not to release or permit to be released the above-described materials to any person, entity, agency, or party whatsoever, nor permit the use of the above-mentioned materials (in whole or in part) by any person, entity, agency, or party without first obtaining the written permission of The Middle American Research Institute.

Kathe Lawton
Kathe Lawton
Assistant Director
Date 9/20/11

Rachel Egan
Licensee:
Date 9/19/2011

APPENDIX D: IMAGE PERMISSION II

FOUNDATION FOR THE ADVANCEMENT OF MESOAMERICAN STUDIES, INC.
268 South Suncoast Boulevard, Crystal River, FL 34429-5498
Phone: (352) 795-5990 Fax: (352) 795-1970 email: famsi@famsi.org



COPYRIGHT LICENSE AND INVOICE

September 13, 2011

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL, United States, 32826
Email: rachel.egan@nights.ucf.edu

Invoice Number: M#135

This number required for all correspondence.

Upon payment of this invoice, the rights specifically described below are granted to the Recipient by the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI) and the copyright holder(s) of the material(s) with regard to their reproduction and use.

Description of Material: (Drawings/Photographs/Images):

Piedras Negras Stela 1 (front), 3 (back), 8 (front), 11 (front and left sides), 35 (front), and 40 (front)

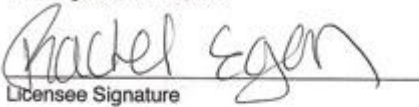
Permission is Granted for: One-time, Non-exclusive use of the materials described above to University of Central Florida, for use in the thesis titled "Quatrefoils During the Classic Period", authored by Rachel Egan. Copyright notice/credit line must accompany the material (either on, under, or next to the item) as follows: © Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org. Please also cite FAMSI in any bibliographic listing.

Total Usage Fee (due upon receipt of this invoice):

\$0.00

All sums are payable in U.S. dollars. (Memo or notation on cheque should state "gift".)
Please remit payment to address below, with cheque payable to: LACMA

FAMSI c/o LACMA
Attn: Finance Office
5905 Wilshire Blvd
Los Angeles, CA 90036


Licensee Signature

9/14/11
Date


Sandra Noble, Ph.D.
FAMSI, Executive Director

September 13, 2011
Date

FOUNDATION FOR THE ADVANCEMENT OF MESOAMERICAN STUDIES, INC.
268 South Suncoast Boulevard, Crystal River, FL 34429-8498
Phone: (352) 795-5960 Fax: (352) 795-1970 email: famsi@famsi.org



COPYRIGHT LICENSE AND INVOICE

September 1, 2011

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL, USA, 32826
Email: rachel.egan@rights.ucf.edu

Invoice Number: S#355

This number required for all correspondence.

Upon payment of this invoice, the rights specifically described below are granted to the Recipient by the Foundation for the Advancement of Mesoamerican Studies, Inc. (FAMSI) and the copyright holder(s) of the material(s) with regard to their reproduction and use.

Description of Material: (Drawings/Photographs/Images):

SD131: Tablet of the Slaves, SD180: South Jamb Temple of the Foliated Cross, SD175: West Jamb Temple of the Cross, SD229: The Creation Panel, SD7618: Pacal Sarcophagus Cover, SD2062: Structure 4 Lintel 2, SD7623: El Peru Altar

Permission is Granted for: One-time, Non-exclusive use of the materials described above to University of Central Florida, for use in the thesis titled "Quatrefoils During the Classic Period", authored by Rachel Egan. Copyright notice/credit line must accompany the material (either on, under, or next to the item) as follows: Drawing(Photograph) by Linda Schele, © David Schele, courtesy Foundation for the Advancement of Mesoamerican Studies, Inc., www.famsi.org. Please also cite FAMSI in any bibliographic listing.

Total Usage Fee (due upon receipt of this invoice):


\$0.00

All sums are payable in U.S. dollars. (Memo or notation on cheque should state "gift".)
Please remit payment to address below, with cheque payable to: LACMA


FAMSI c/o LACMA
Attn: Finance Office
5905 Wilshire Blvd
Los Angeles, CA 90036



Licensee Signature



Date



Sandra Noble, Ph.D.
FAMSI, Executive Director

September 26, 2011
Date

APPENDIX E: IMAGE PERMISSION III

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL 32826
Rachel.egan@knights.ucf.edu
Date: ___ 9/21/2011 ___

Dear Dr. Houston:

This letter will confirm our recent email conversation. I am completing a master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument photograph

Aguacatal Stuccoed Altar

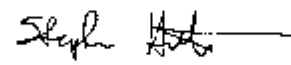
The requested permission extends to any future revisions and editions of my thesis/dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely, 

Date: ___ 9/21/2011 ___

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:


By: _____

Stephen Houston
Dupee Family Professor of Social Sciences
Brown University
Providence, RI 02912

Date: ___ Sept. 21, 2011 ___

APPENDIX F: IMAGE PERMISSION IV

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL 32826
Rachel.Egan@knights.ucf.edu
Date: 9/21/2011

Dear Dr. Love:

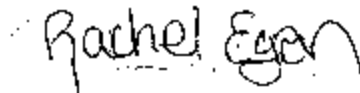
This letter will confirm our recent email conversation. I am completing a doctoral master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument drawing(s):

La Blanca Monument 3

The requested permission extends to any future revisions and editions of my thesis/dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.


If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely,



Date: 9/21/2011

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: 

Dr. Michael W. Love
Office Location: Sierra Hall, Room 240-K
Email: michael.love@csun.edu
Office Phone: (818) 677-3323

Date: 9/21/2011

APPENDIX G: IMAGE PERMISSION V

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL 32826
Rachel.egan@knights.ucf.edu
Date: _____9/21/2011_____

Dear Dr. Looper:

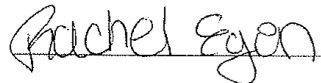
This letter will confirm our recent email conversation. I am completing a doctoral master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument drawing(s):

Quirigua Monument 23, Altar Q, Altar R

The requested permission extends to any future revisions and editions of my thesis/dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely,



Date: _____9/11/2011_____

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: _____

Matthew Looper
Department of Art and Art History
California State University, Chico
Chico, CA 95929-0820

Date: 9/22/11

APPENDIX H: IMAGE PERMISSION VI

Rachel Egan
3517 Alafaya Commons Cir
Apt 1526
Orlando, FL 32826
Rachel.egan@knights.ucf.edu
Date: 9/21/2011 _____

Dear Dr. Grove:

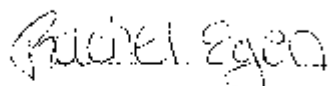
This letter will confirm our recent email conversation. I am completing a doctoral master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument drawing(s):

Chalcatzingo Mon. 1 and Mon. 9 (published in the book *Chalcatzingo: Excavations on the Olmec Frontier (1984)*)

The requested permission extends to any future revisions and editions of my thesis/dissertation, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.


If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely,



Date: 9/21/2011 _____

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By:  _____

Dr. Grove
Department of Anthropology . 1112 Turlington Hall, P.O. Box 117305 University of
Florida . Gainesville, FL 32611-7305

Date: 9-22-2011

APPENDIX I: IMAGE PERMISSION VII

APPENDIX J: IMAGE PERMISSION VIII

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL 32826
Rachel.egan@knights.ucf.edu
Date: 9/28/2011

Dear Dr. Goldsmith:

This letter will confirm the details as outlined in our recent email conversation for publication of NWAf images in my master's thesis. I am completing a master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument drawing(s):

Izapa Stela 8 and Stela 27

Further, I acknowledge that use of these images requires I abide by the following guidelines:

- (1) The illustrations have been published by NWAf
- (2) Proper credit will be given to the illustrator(s) and NWAf.

The requested permission extends to any future revisions and editions of my thesis, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely, Rachel Egan

Date: 11/28/2011
Rachel Egan

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: Kim C. Goldsmith, PhD

Kim C. Goldsmith
Director
Research and Study Center
New World Archaeological Foundation
San Cristobal de las Casas, Chiapas, Mexico

Date: Sept. 28, 2011

APPENDIX K: IMAGE PERMISSION IX

Reproduction Rights

#RR2745 Rachel Egan

Invoice **RR2745**
 RR format sent

Client ID no 1821
 Bill To Rachel Egan
 Dept.
 Company
 Address
 City
 State
 Country 734-223-7754
 Phone
 Fax
 Email Radkegan@gmail.com
 Keeper

Client ID no 1821
 Request Date 9/28/2011
 Date Shipped
 Deadline

PDF made?
 Ship To Rachel Egan
 Dept.
 Company
 Address
 City
 State
 Country 734-223-7754
 Phone
 Fax
 Email Radkegan@gmail.com
 Date Requested

Publisher
 Author(s)/Eds.
 Medium
 Title
 Other Title
 Additional Terms

Edition #
 Print Run
 Pub. Date

Image number	Object number	RR Image Description	RR Format	Subtotal:	Tax:	Unit Price Qty.	Amount
		Caractl. Altar 1		25.00	% 0.00	1	25.00
	Altar 4			0.00		1	0.00
	Altar 6			0.00		1	0.00
	Altar 14			0.00		1	0.00
	Altar 3			0.00		1	0.00
	Altar 15			0.00		1	0.00
	Altar 19			0.00		1	0.00
	Altar 7			0.00		1	0.00

Rachel Egan

Maureen Goldblatt

Rachel Egan Maureen Goldblatt

APPENDIX L: IMAGE PERMISSION X

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, FL 32826
Rachel.egan@knights.ucf.edu
Date: 10/4/2011

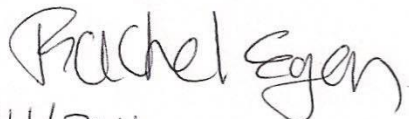
Dear Dr. Barbara Fash

This letter will confirm our recent email conversation. I am completing a master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument drawing(s):

Copan Peccary Skull, Motmot Marker, the North, South and Center Ballcourt Markers, Altar W'

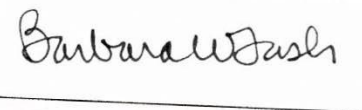
The requested permission extends to any future revisions and editions of my thesis, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely, 

Date: 10/4/2011

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:


By: _____

Director, Corpus of Maya Hieroglyphics Program and Mesoamerican Laboratory
Harvard University, 11 Divinity Avenue, Cambridge, MA 02138

Date: 10/11/11

Requestee must acknowledge the drawing sources in a credit line as:
[drawing description]. Drawing by Barbara W. Fash.

APPENDIX L: IMAGE PERMISSION XI

Rachel Egan
3512 Alafaya Commons Cir
Apt 1526
Orlando, Fl 32826
Rachel.egan@knights.ucf.edu
Date: 9/21/2011

Dear Dr. Mathews

This letter will confirm our recent email conversation. I am completing a master's degree at the University of Central Florida entitled "The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography." I would like your permission to reprint in my thesis the following monument drawing(s):

Bonampak Stela 1 and Stela 2

The requested permission extends to any future revisions and editions of my thesis, including non-exclusive world rights in all languages. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own or your company owns the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated below and return it to me via email. Thank you for your attention in this matter.

Sincerely,



Date: 9/21/2011

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

By: P. Mathews

La Trobe University
Melbourne Victoria 3086
Australia

Date: 7 Oct. 2011

APPENDIX M: IMAGE PERMISSION XII



PEABODY MUSEUM PRESS

PEABODY MUSEUM
OF ARCHAEOLOGY & ETHNOLOGY
HARVARD UNIVERSITY

LICENSE AGREEMENT

Harvard: The educational and charitable corporation established under the laws of Massachusetts, whose corporate name is "President and Fellows of Harvard College."

Licensee: Rachel Egan
3512 Alafaya Commons Circle
Orlando, FL 32826

Harvard and Licensee hereby agree as follows:

1. Harvard owns and maintains the Corpus Program Archive in the Peabody Museum of Archaeology and Ethnology (the "Corpus Archive"). The Archive is unique and valuable. Licensee seeks permission from Harvard to reproduce an image or images as set forth below. In consideration for Harvard providing such access to the Archive to Licensee, Licensee agrees as follows.
2. Licensee agrees to restrict its reproduction of the image(s) described in Paragraph 6 to the following use(s) and acknowledges that it has permission only for the use(s) below:
 - In the following doctoral thesis:
The Center and the Portal: New Perspectives on the Quatrefoil in Classic Maya Iconography
Edited by Dr. A Chase, Dr. S. Barber, Dr. D. Chase
Author: Rachel Egan
Publisher: University of Central Florida
Publication date: December 2011
3. Harvard will not be responsible for any costs associated with the use(s) above that are incurred by the Licensee. In addition:
 - Harvard will waive permission fees associated with the use(s) of the image(s) as stated above.

11 DIVINITY AVENUE, CAMBRIDGE, MASSACHUSETTS 02138-2019 U.S.A.
EDITORIAL & PRODUCTION 617/495-3938 FAX 617/495-7535 ADMINISTRATION 617/495-4255

- The Licensee will send one copy of the Book when published.
4. Licensee understands that the fees stated in Paragraph 3 are based upon Licensee's intended use of the image(s).
 5. For any use additional to or beyond that stated above, Licensee must contact Harvard for additional permissions. Licensee may not grant permission to others to use the image(s) except to the extent it is necessary to accomplish the specific use(s) described above. Licensee will not permit photography of any image(s) included in this license agreement except as otherwise authorized by Harvard. In addition, the image(s) may not be filmed, taped, televised or digitized without express Harvard permission. No reproductions of the image(s) may be distributed commercially or offered for sale without prior written approval from Harvard.
 6. The image(s) described below must be used "as is" for the use(s) described in Paragraph 2, and Harvard does not make any representations as to accuracy or authenticity.

<u>Description of image</u>	<u>Corpus Program Archive Source</u>
-----------------------------	--------------------------------------

Naranjo

Drawing, Stela 6 V.2.1 pp.23	To be scanned from the book by Licensee
Drawing, Stela 13 V.2.1 pp.37	To be scanned from the book by Licensee
Drawing, Stela 21 V.2.1 pp.53	To be scanned from the book by Licensee
Drawing, Stela 24 V. 2.1 pp.63	To be scanned from the book by Licensee
Drawing, Stela 29 V. 2.2 pp.77	To be scanned from the book by Licensee
Drawing, Stela 40 V. 2.2 pp.101	To be scanned from the book by Licensee
Drawing, Altar 1 V.2.2. pp.103	To be scanned from the book by Licensee

Xultun

Drawing, Stela 24 V. 5.2 P. 84	To be scanned from the book by Licensee
--------------------------------	---

Yaxchilan

Drawing, Lintel 9 V. 3.1. pp.29	To be scanned from the book by Licensee
Drawing, Lintel 14 V. 3.1 pp.37	To be scanned from the book by Licensee
Drawing, Lintel 24 V. 3.1 pp.53	To be scanned from the book by Licensee
Drawing, Lintel 25 V. 3.1 pp.55	To be scanned from the book by Licensee
Drawing, Lintel 33 V. 3.2 pp.75	To be scanned from the book by Licensee
Drawing, Lintel 46 V. 3.2 pp.101	To be scanned from the book by Licensee
Drawing, Lintel 50 V. 3.2 pp.109	To be scanned from the book by Licensee

7. Licensee agrees to include the following credit(s) for the image(s) in the use(s) described in Paragraph 2:

Yaxchilan Lintel 9, 14, 24, 25, 33, 46, and 50. Drawing by Ian Graham *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 3, Part 1, *Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Yaxchilan Lintel 33, 46, and 50. Drawing by Ian Graham *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 3, Part 2, *Yaxchilan*, reproduced courtesy of the President and Fellows of Harvard College.

Xultun, Stela 24 V. 5.2 Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 5, Part 2, *Xultun*, reproduced courtesy of the President and Fellows of Harvard College.

Naranjo, Stela 6, 13, 21, 24. Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 2, Part 1, *Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Naranjo, Altar 1, Stela 29, 40. Drawing by Ian Graham, *Corpus of Maya Hieroglyphic Inscriptions*, Vol. 2, Part 2, *Naranjo*, reproduced courtesy of the President and Fellows of Harvard College.

Licensee may not use the name, logo, or emblem of Harvard, or any of its schools or affiliates. Licensee acknowledges that immediate and irreparable damage will result if this provision is not specifically enforced. Therefore, in addition to, and not in limitation of, any other remedy available to Harvard, Harvard may enforce the foregoing provision in judicial proceedings by a decree of specific performance and injunctive relief.

8. This Agreement is the entire agreement between the parties with respect to the subject matter hereof. This Agreement shall not be amended or otherwise modified except by a writing signed by each of the parties hereto. This Agreement shall be binding on and inure to the benefit of the parties and their respective heirs, beneficiaries, executors, legal representatives, successors, and assigns. No delay or omission in the exercise or enforcement of any right or remedy provided hereunder or by law by either party shall be construed as a waiver of such right or remedy. If any of the provisions of this Agreement are determined to be invalid, unenforceable, or illegal, such determination shall not affect the remaining provisions of this Agreement. Nothing in this Agreement shall cause the parties to be deemed partners or joint venturers. This Agreement is signed under seal and shall be governed by the laws of Massachusetts without regard to its principles of conflict of laws. To the extent permitted by law, the parties hereto consent to the jurisdiction of the courts of Massachusetts in any dispute arising out of this Agreement. This Agreement may be delivered by facsimile transmission. A facsimile or photocopy of the Agreement shall be considered the same as an original.

PRESIDENT AND FELLOWS
OF HARVARD COLLEGE

By: *D Waddington*

Print name: [Denise Waddington]

Date: 11/7/2011

LICENSEE:

By: *Rachel Egan*

Print name: [Rachel Egan]

Date: 11/13/2011

LIST OF REFERENCES

- Barber, S. B. (2005). *Heterogeneity, Identity, and Complexity: Negotiating Status and Authority in Terminal Formative Coastal Oaxaca*, Ph.D. Dissertation, Department of Anthropology, University of Colorado at Boulder.
- Bardsley, S. N. (1994). *Rewriting History at Yaxchilan: Inaugural Art of Bird Jaguar IV*. In *Seventh Palenque Round Table*, 1989, edited by V. M. Fields. The Palenque Round Table series. vol. 9, M. G. Robertson, general editor. Pre-Columbian Art Research Institute, San Francisco.
- Barrientos, T. (2008). *Hydraulic Systems in Central Cancuén: Ritual, Reservoir, and/or Drainage?* 09/11/2011. In <http://www.famsi.org/reports/05082/index.html>.
- Bassie-Sweet, K. (1991). *From the Mouth of the Dark Cave: Commemorative Sculpture of the Late Classic Maya*. University of Oklahoma Press Norman, OK.
- Bassie-Sweet, K. (1996). *At the Edge of the World: Caves and Late Classic Maya Worldview*. University of Oklahoma Press, Norman.
- Baudez, C. F. (1993). *The Cross Group at Palenque*. In *Eighth Palenque Round Table*, edited by M. J. Macri and J. McHargue, pp. 121-128, M. G. Robertson, general editor. Pre-Columbian Art Research Institute San Francisco.

Baudez, C. F. (1994). *Maya Sculpture of Copan: the Iconography*. University of Oklahoma Press, OK.

Baudez, C. F. (1999). Perils of Iconography: the Maya. *Antiquity* 73(282):946-950.

Beetz, C. P. and L. Satterthwaite (1981). *The Monuments and Inscriptions of Caracol, Belize*.
University Museum, University of Pennsylvania, Philadelphia.

Benson, E. P. (1985). Architecture as a Metaphor. In *Fifth Palenque Round Table*, edited by V. M. Fields, pp. 183-188. vol. 7, M. G. Robertson, general editor. Pre-Columbian Art Institute, San Francisco.

Brady, J. E. (1997). Settlement Configuration and Cosmology: the Role of Caves at Dos Pilas.
American Anthropologist 99(3):602-618.

Brady, J. E. and W. Ashmore (1999). Mountains, Caves, Water: Ideational Landscapes of the Ancient Maya. In *Archaeologies of Landscape: Current Perspectives*, edited by W. Ashmore and A. b. Knapp, pp. 124-148. Blackwell Publishers, Inc, Malden.

Brady, J. E. and K. M. Prufer (2005). *In the Maw of the Earth Monster: Mesoamerican Ritual Cave Use*. University of Texas Press, TX.

Brady, J. E. and A. Stone (1986). Naj Tunich: Entrance to the Maya Underworld. *Archaeology* 39(6):18-25.

Chase, A. F. and D. Z. Chase (2009). Changes in Maya Religious Worldview: Liminality and the Archaeological Record. In *Maya Worldviews at Conquest*, edited by L. Cecil and E. T. Pugh, pp. 219-237. University Press of Colorado, Boulder.

Chase, A. F. and D. Z. Chase (2001). The Royal Court of Caracol, Belize: Its Palaces and People. In *Royal Courts of the Ancient Maya: Volume 2: Data and Case Studies*, edited by T. Inomata and S. D. Houston, pp. 102-137. Westview Press, Boulder.

Chase, A. F. and D. Z. Chase (2011). Status and Power: Caracol, Teotihuacan, and the Early Classic Maya World. *Research Reports in Belizean Archaeology* 8:3-18.

Chase, A. F. and D. Z. Chase (In press). Belize Red Ceramics and Their Implications for Trade and Exchange in the Eastern Maya Lowlands. *Research Reports in Belizean Archaeology* 10.

Chase, A.F., D. Z. Chase and H. W. Topsey (1988). Archaeology and the Ethics of Collecting. *Archaeology* 41(1): 56-60, 87.

- Chase, A. F. (1985). *Troubled Times: The Archaeology and Iconography of the Terminal Classic Southern Lowland Maya*. In *Fifth Palenque Round Table*, edited by V. M. Fields, pp. 103-114. vol. 7, M. G. Robertson, general editor. Pre-Columbian Art Institute, San Francisco.
- Chase, A. F. (1992). *Elites and the Changing Organization of Classic Maya Society*. In *Mesoamerican Elites: An Archaeological Assessment*, edited by D. Z. C. a. A. F. Chase, pp. 30-49. University of Oklahoma Press, Norman.
- Chase, D. Z. (1991). *Lifeline to the Gods: Ritual Bloodletting at Santa Rita Corozal*. In *Sixth Palenque Roundtable*, edited by V. M. Fields, pp. 89-96. vol. 8, M. G. Robertson, general editor. Pre-Columbian Art Institute, San Francisco.
- Chase, D. Z. and A.F. Chase (1985). *Redefining Maya Prehistory: Archaeology at Santa Rita Corozal, Belize*. *The New Belize* 15(11 & 12): 14-17.
- Chouinard, J. (1995). *Mouths of Stone: Stories of the Ancient Maya from Newly Deciphered Inscriptions and Recent Archaeological Discoveries*. Carolina Academic Press, CA.
- Clancy, F. S. (2009). *The Monuments of Piedras Negras, an Ancient Maya City*. University of New Mexico Press, NM.

Coggins, C. (1980). The shape of Time: Some Political Implications of a Four-part Figure. *American Antiquity* 45(4):727-739.

Comaroff, J. L. and J. Comaroff (1992). *Ethnography and the Historical Imagination*. Westview Press, Boulder.

Demarest, A. and G. Conrad (1992). *Ideology and pre-Columbian Civilizations*. School of American Research, Santa Fe.

Fash, B. W. (2005). Iconographic Evidence for Water Management and Social Organization at Copan. In *Copan: The History of an Ancient Maya Kingdom*, edited by W. W. Andrews and W. L. Fash, pp. 103-138. School of American Research, Santa Fe.

Fash, B. W. (2009). Watery Places and Urban Foundations Depicted in Maya Art and Architecture. In *The Art of Urbanism: how Mesoamerican kingdoms represented themselves in architecture and imagery*, pp. 230-259. Dumbarton Oaks Research Library & Collection, Washington, D.C.

Fash, W. L. (1994). Dynastic Architectural Programs: intention and design in Classic Maya buildings at Copan and other sites. In *Function and Meaning in Classic Maya Architecture. A Symposium at Dumbarton Oaks*, edited by S. Houston, pp. 223-270. Dumbarton Oaks Research Library and Collection, Washington D.C.

- Freidel, D., L. Schele and J. Parker (2008). *Maya Cosmos: Three Thousand Years on the Shaman's Path*. Cambridge Archaeological Journal 5(01):115-137.
- Gillespie, S. D. (1993). Power, Pathways, and Appropriations in Mesoamerican Art. In *Imagery and Creativity: Ethnoaesthetics and Art Worlds in the Americas*, edited by D. S. Whitten and J. N.E. Whitten, pp. 67-107. University of Arizona Press, Tucson.
- Graham, I. (1967). *Archaeological Explorations in El Peten, Guatemala*. Middle American Research Institute, New Orleans.
- Graham, I., E. Von Euw, P. Mathews and D. Stuart (1997). *Corpus of Maya Hieroglyphic Inscriptions*. Peabody Museum of Archaeology and Ethnology, Harvard University.
- Grove, D. C. (1968). Chalcatzingo, Morelos, Mexico: a Reappraisal of the Olmec Rock Carvings. *American Antiquity* 33(4):486-491.
- Grove, D. C. (2000). Faces of the Earth at Chalcatzingo, Mexico: Serpents, Caves, and Mountains in *Middle Formative Period Iconography*. In *Olmec Art and Archaeology*, edited by J. E. Clark and M. E. Pye, pp. 277-296. National Gallery of Art, Washington D.C.
- Grube, N. (1992). Classic Maya Dance. *Ancient Mesoamerica* 3(02): 201-218.

- Grube, N. (1994). Epigraphic Research at Caracol, Belize. In *Studies in the Archaeology of Caracol, Belize*, edited by D. Z. Chase and A. F. Chase, pp. 83-122. Pre-Columbian Art Research Institute, San Francisco.
- Guernsey, J. (2006). *Ritual and Power in Stone: the Performance of Rulership in Mesoamerican Izapan Style Art*. University of Texas Press, TX.
- Guernsey, J. (2010). A Consideration of the Quatrefoil Motif in Preclassic Mesoamerica. *RES* 57(58): 75-96.
- Guernsey, J., J. E. Clark and A. F. Arroyo (2010). *The Place of Stone Monuments: context, use, and meaning in Mesoamerica's Preclassic transition*. Dumbarton Oaks Research Library and Collection, Washington D.C.
- Hanks, W. (1989). Word and Image in a Semiotic Perspective. In *Word and Image in Maya Culture: explorations in language, writing and representation*, edited by W. R. D. Hanks. University of Utah Press.
- Hellmuth, N. M. (1987). *Monster und Menschen in der Maya-Kunst: eine Ikonographie der alten Religionen Mexikos und Guatemalas*. Akademische Druck-u. Verlagsanstalt, Germany.

Hendon, J. A. and R. A. Joyce (2004). *Mesoamerican Archaeology: Theory and Practice*. Blackwell Publications, Malden.

Houston, S., K. Taube, R. Matheny, D. N. Z. Matheny, G. Ware and C. Mesick (2005). The Pool of the Rain God: an early stuccoed altar at Aguacatal, Campeche, Mexico. *Mesoamerican Voices* 2(1):1-28.

Houston, S. D. (1986). Problematic Emblem Glyphs: Examples from Altar de Sacrificios, El Chorro, Rio Azul, and Xultun. Center for Maya Research.

Houston, S. D. (1987). Appendix II: Notes on Caracol Epigraphy and Its Significance. In *Investigations at the Classic Maya City of Caracol, Belize: 1985-1987*, edited by A. F. Chase and D. Z. Chase, pp. 85-100. Pre-Columbian Art Research Institute, San Francisco.

Houston, S. D., D. Stuart and K. A. Taube (2006). *The Memory of Bones: Body, Being, and Experience Among the Classic Maya*. University of Texas Press, TX.

Jones, C., L. Satterthwaite and W. R. Coe (1982). *The Monuments and Inscriptions of Tikal: the carved monuments*. University Museum, University of Pennsylvania, Philadelphia.

Locke, J. (1894). *An Essay Concerning Human Understanding*. Clarendon Press, Oxford.

- Looper, M. G. (2003). *Lightning Warrior: Maya art and kingship at Quirigua*. University of Texas Press, Austin.
- Love, M. and J. Guernsey (2007). Monument 3 from La Blanca, Guatemala: a Middle Preclassic earthen sculpture and its ritual associations. *Antiquity Oxford* 81(314): 920.
- Marcus, J. (1974). The Iconography of Power Among the Classic Maya. *World Archaeology* 6(1):83-94.
- Marcus, J. (1992). *Mesoamerican Writing Systems: Propaganda, Myth, and History in Four Ancient Civilizations*. Princeton University Press, Princeton.
- Martin, S. and N. Grube (2008). *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya*. Thames & Hudson, London.
- Mathews, J. P. and J. F. Garber (2004). Models of Cosmic Order: Physical expression of sacred space among the ancient Maya. *Ancient Mesoamerica* 15(01):49-59.
- Mathews, P. (1978). Notes on the Dynastic Sequence of Bonampak, Part 1. In *Third Palenque Round Table*, edited by M. G. Robertson, pp. 60-73. vol. 5. University of Texas Press, Austin.
- Miller, M. E. (1999). *Maya Art and Architecture*. Thames and Hudson, London.

- Palka, J. W. (2002). Left/Right Symbolism and the Body in Ancient Maya Iconography and Culture. *Latin American Antiquity* 13(4):419-443.
- Parmentier, R. J. (1997). The Pragmatic Semiotics of Cultures. *Semiotica* 106(1).
- Pauketat, T. R. (2000). The Tragedy of the Commoners. In *Agency in Archaeology*, edited by M. Dobres and J. E. Robb, pp. 113-129. Routledge, London.
- Pauketat, T. R. and T. E. Emerson (1999). The Representation of Hegemony as Community at Cahokia. In *Material Symbols: Culture and Economy in Prehistory*, edited by J. E. Robb, pp. 302-317. Southern Illinois University, Carbondale.
- Preucel, R. W. (2010). *Archaeological Semiotics*. Blackwell, Malden.
- Reilly III, F. K. (1991). Olmec Iconographic Influences on the Symbols of Maya Rulership: An Examination of Possible Sources. In *The Sixth Palenque Roundtable*, edited by V. M. Fields, pp. 151-161. vol. 8, M. G. Robertson, general editor. University of Oklahoma Press, Norman.
- Rice, P. M. (2004). *Maya Political Science: time, astronomy, and the cosmos*. University of Texas Press, Austin.

Robertson, M. G. (1983). *The Sculpture of Palenque. Vol. I, The Temple of the Inscriptions*. Princeton University Press, Princeton.

Robertson, M. G. (1985a). *The Sculpture of Palenque. Vol. II, The Early Buildings of the Palace and the Wall Paintings*. Princeton University Press, Princeton.

Robertson, M. G. (1985b). *The sculpture of Palenque. Vol. III, The Late Buildings of the Palace*. Princeton University Press, Princeton.

Robertson, M. G. (1991). *The Sculpture of Palenque: Vol. IV. The Cross Group*. Princeton University Press, Princeton.

Saturno, W. A., K. A. Taube, D. Stuart and H. Hurst (2005). *The Murals of San Bartolo, El Peten, Guatemala Part 1: The North Wall*. *Ancient America* 7:1-56.

Scarborough, V. L. (1998). *Ecology and Ritual: Water Management and the Maya*. *Latin American Antiquity* 9(2): 135-159.

Schavelzon, D. (1980). *Temples, Caves, or Monsters? Notes on Zoomorphic Facades in Pre-Hispanic Architecture*. In *Third Palenque Round Table, Part 2*, edited by M. G. Robertson, pp. 151-162. vol. 5. University of Texas Press, Austin.

- Schele, L. and D. A. Freidel (1990). *A Forest of Kings: The Untold Story of the Ancient Maya*. Morrow, NY.
- Schele, L., P. Mathews, M. Everton and J. Kerr (1998). *The Code of Kings: The Language of Seven Sacred Maya Temples and Tombs*. Touchstone, NY.
- Schele, L. and M. E. Miller (1992). *The Blood of Kings: Dynasty and Ritual in Maya Art*. Thames and Hudson, London.
- Schele, L. and K. D. Vilella (1996). *Creation, Cosmos, and the Imagery of Palenque and Copan*. In *Mesoweb: An Exploration of Mesoamerican Cultures*. PDF online publication, Mesoweb Articles.
- Seler, E. (1901-1902). *Codex Fejervary-Mayer: An Old Mexican Picture Manuscript*. Liverpool Free Public Museum. T. and A. Constable, Edinburgh.
- Sharer, R. J. (1978). *Archaeology and History at Quirigua, Guatemala*. *Journal of Field Archaeology* 5(1): 51-70.
- Sharer, R. J. and L. P. Traxler (2006). *The Ancient Maya*. Stanford University Press, Stanford, CA.

- Smith, M. E. (2005). Did the Maya Build Architectural Cosmograms? *Latin American Antiquity* 16: 217-224.
- Smith, M. E. and F. F. Berdan (2003). *The Postclassic Mesoamerican World*. University of Utah Press, Salt Lake City.
- Spero, J. M. (1986). Beyond Rainstorms: The Kawak as an Ancestor, Warrior, and Patron of Witchcraft. In *Sixth Palenque Round Table*, edited by V. M. Fields, pp. 123-143, M. G. Robertson, general editor. University of Oklahoma Press, Norman.
- Steward, J. H. (1942). The Direct Historical Approach to Archaeology. *American Antiquity* 7(4): 337-343.
- Stone, A. (1995). *Images from the Underworld: Naj Tunich and the Tradition of Maya Cave Painting*. University of Texas Press, TX.
- Stone, A. (2005). Scribes and Caves in the Maya Lowlands. In *Stone Houses and Earth Lords: Maya Religion in the Cave Context*, edited by J. E. B. Keith M. Prufer, pp. 135-148. University Press of Colorado, Boulder.

Stone, A. (2009). Scribes and Caves in the Maya Lowlands. In *Stone Houses and Earth Lords: Maya Religion in the Cave Context*, edited by K. M. Prufer and J. E. Brady, pp. 135-147. University Press of Colorado, Boulder.

Stone, A. M. Z. (2011). *Reading Maya Art: A Hieroglyphic Guide to Ancient Maya Painting and Sculpture*. Thames and Hudson, London and New York.

Stross, B. (1996). The Mesoamerican Cosmic Portal: An Early Zapotec Example. *RES: Anthropology and Aesthetics* 29(30): 82-101.

Stross, B. (2007). *The Mesoamerican Sacrum Bone: Doorway to the Otherworld*. University of Texas, Austin.

Stuart, D. and G. Stuart (2008). *Palenque, Eternal city of the Maya*. Thames and Hudson, London.

Tate, C. E. (1992). *Yaxchilan: The design of a Maya ceremonial city*. University of Texas Press, Austin.

Taube, K. A. (1988). A Prehispanic Maya Katun Wheel. *Journal of Anthropological Research* 44(2): 183-203.

Taube, K. A. (1994). The Jade Hearth: Centrality, rulership, and the Classic Maya temple. In *Function and Meaning in Classic Maya architecture: a symposium at Dumbarton Oaks, 7th and 8th October 1994*, edited by S. D. Houston, pp. 427-478. Dumbarton Oaks Research Library and Collection, Washington D.C.

Taube, K. A. (2003). Maws of Heaven and Hell: The Symbolism of the Centipede and Serpent in Classic Maya Religion. *Anthropologia de la Eternidad: la muerte en la culutra Maya*, 7:405-442.

Taube, K. A. (2004). Flower Mountain: Concepts of Life, Beauty, and Paradise Among the Classic Maya. *Res: Anthropology and Aesthetics* (45): 69-98.

Taylor, D. (1978). The Cauac Monster. In *Proceedings of the Tercera Mesa Redonda de Palenque*, edited by M. G. Robertson and D. C. Jeffers, pp. 79-89. Pre-Columbian Art Research Center, Palenque.

Thompson, J. E. S. (1934). *Sky Bearers, Colors and Directions in Maya and Mexican Religion* 436. Carnegie Institution Washington.

Tomasic, J., C. Quintanilla and E. Barrios (n.d.). *Excavations at the Archaeological Site of Tres Islas, Rio Pasion, Peten*

Vogt, E. Z. (1964). Ancient Maya and Contemporary Tzotzil Cosmology: a comment on some methodological problems. *American Antiquity* 30(2): 192-195.

Vogt, E. Z. and D. Stuart (2005). Some Notes on Ritual Caves Among the Ancient and Modern Maya. In *Maw of the Earth Monster: Mesoamerican Ritual Cave Use*, edited by J. E. Brady and K. M. Prufer, pp. 155-185. University of Texas Press, Austin.

Wilson-Mosley, D. I., A. F. Chase and D. Z. Chase (2010). Maya 'Travelers': Iconography, Liminality, and Ancient Worldview. *Research Reports in Belizean Archaeology* 7: 25-36.