The Early/Middle Formative Kanocha Phase (1200-850 B.C.) at Blackman Eddy, Belize

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Research Year: 2001
Culture: Maya
Chronology: Early Pre-Classic into the Middle Pre-Classic
Location: Belize Valley
Site: Blackman Eddy

Table of Contents

Abstract

Recent investigations at the site of Blackman Eddy, Belize revealed a series of structures and associated features which date to the end of the Early Formative and continue into the Middle Formative. This early occupation dates to the Kanocha phase (1200 B.C.-850 B.C.). Ceramic material from the Kanocha phase has affinities to the slightly later Xe material and exhibits iconographic elements related to the "Olmec Style". This early symbolism appears on locally produced materials and reflects long distance interaction and trade networks. The presence of exotics in these early deposits provides further evidence for participation in long distance trade networks and indicates the emergence of social stratification. The excavation data from Blackman Eddy provides a stratigraphic sequence from the end of the Early Formative onward, documenting changes and elaboration of architecture that reflect the rise of social complexity.

Resumen

Recientes investigaciones en el sitio de Blackman Eddy, Belice, dejaron al descubierto una serie de estructuras y características asociadas que se remontan hasta finales del período Formativo Temprano y continúan hasta el Formativo Medio. Esta ocupación temprana se remonta a la fase Kanocha (1200 a.C.-850 a.C.). El material cerámico de la fase Kanocha tiene afinidades con al material Xe que es un poco más tardío, y muestra elementos relacionados con el "estilo olmeca". Este simbolismo temprano aparece en materiales que se produjeron localmente y refleja interacciones a larga distancia, así como redes comerciales. La presencia de materiales extranjeros en estos depósitos aporta más evidencia de la participación en estas redes comerciales de larga distancia, e indica la aparición de la estratificación social. Los datos de las excavaciones en Blackman Eddy muestran una secuencia estratigráfica que va desde finales del período Formativo Temprano hacia adelante, y documentan los cambios y la elaboración de la arquitectura que reflejan el surgimiento de la complejidad social.

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Introduction

The site of Blackman Eddy is located in west-central Belize on a hill overlooking Blackman Eddy village. Relative to other ceremonial centers in the valley, Blackman Eddy is small, but exhibits the full complement of architecture typical of a major ceremonial center (Garber, 1990) (Figure 1 and Figure 2). The final configuration of the site core was attained in the Late Classic Period (Figure 3). Like other sites in the valley, many of the Blackman Eddy structures have Formative ceramic material within the construction fill. At this point in time however, it would appear that the Middle Formative building activity is restricted to the north end of Plaza B within Structures B1 and B2.

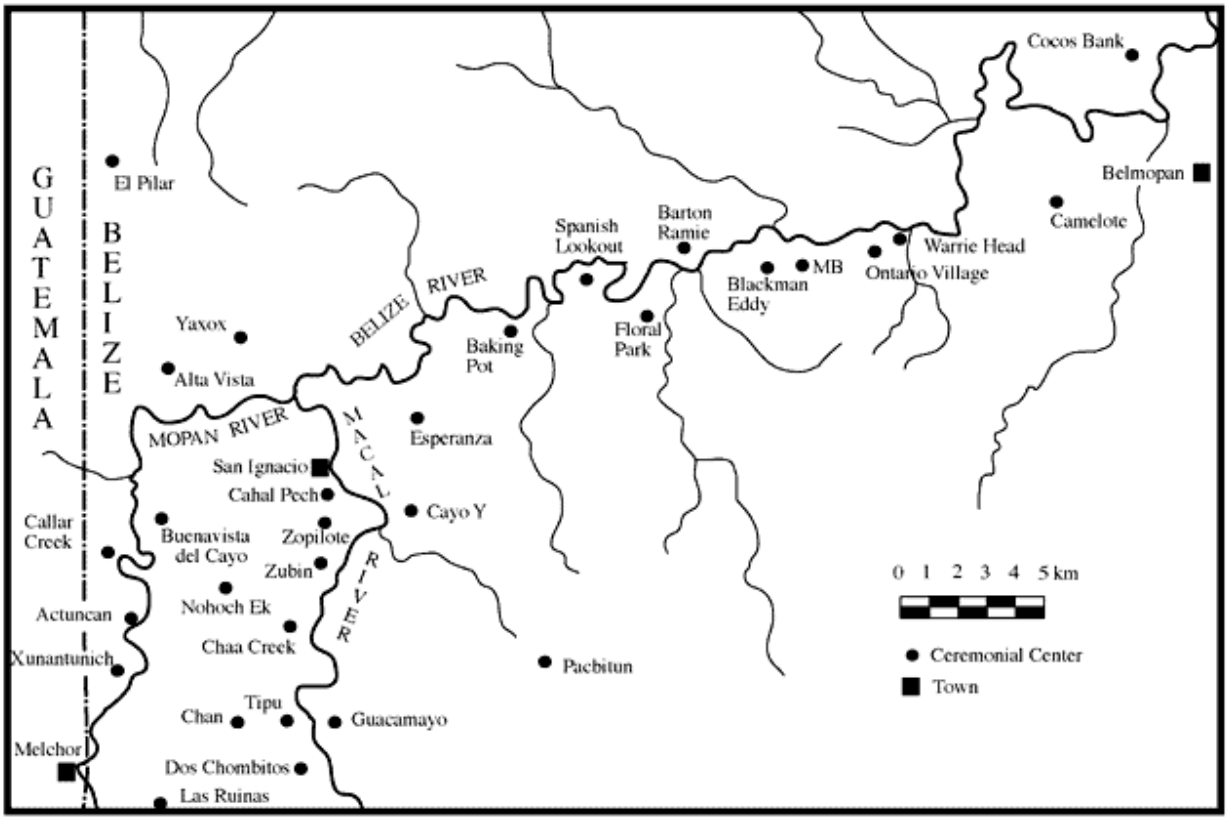

Figure 1. Ceremonial centers in the Belize River Valley.

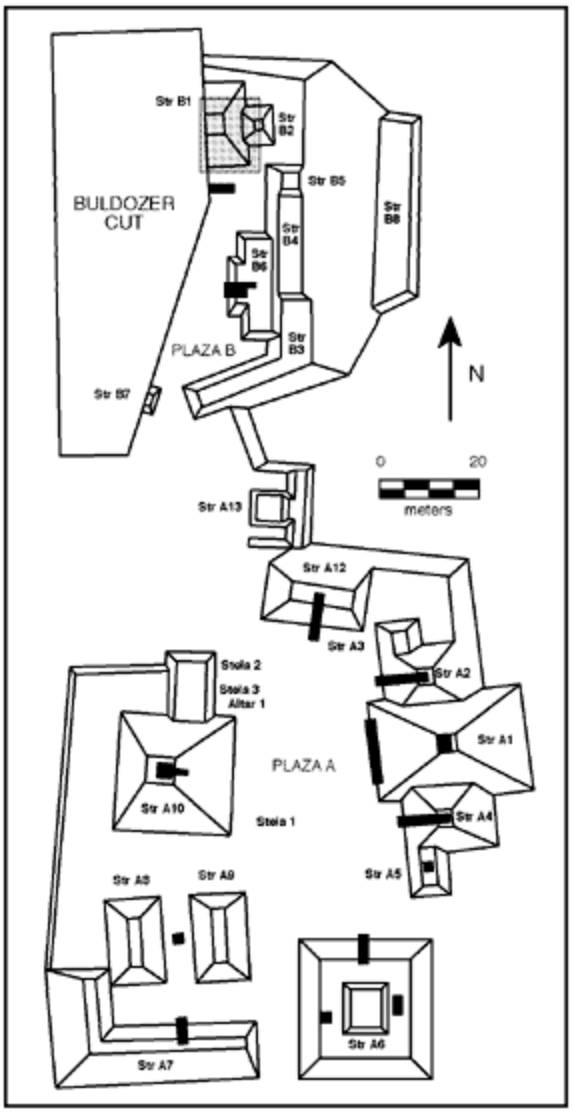

Figure 2. Blackman Eddy site core.

Figure 3. Artist's view of Blackman Eddy looking northwest.

The Southwest Texas State University Belize Valley Archaeological Project (BVAP) has been investigating the site of Blackman Eddy since 1990. Unauthorized bulldozing activity in the mid 1980s cut Structure B1, in half, revealing a profile that illustrated a construction history spanning 2000 years that was initiated towards the end of the Early Formative Period (Figure 4). Continued slumping of the cut threatened the remaining portions of the structure. The Belize Department of Archaeology determined that the damage was too severe to repair and that the best solution was to initiate an intensive excavation program to excavate the remaining portions of the structure to bedrock. The focus of the BVAP project shifted to fully document the construction sequence which provided a unique opportunity to conduct an extensive excavation on a series of Formative constructions.

These excavations have revealed some of the earliest architecture and ceramics in the Maya Lowlands. Structure B1 exhibits a stratigraphic sequence with an initial Formative occupation directly on bedrock, overlain by plaster and masonry platforms of increasing size.

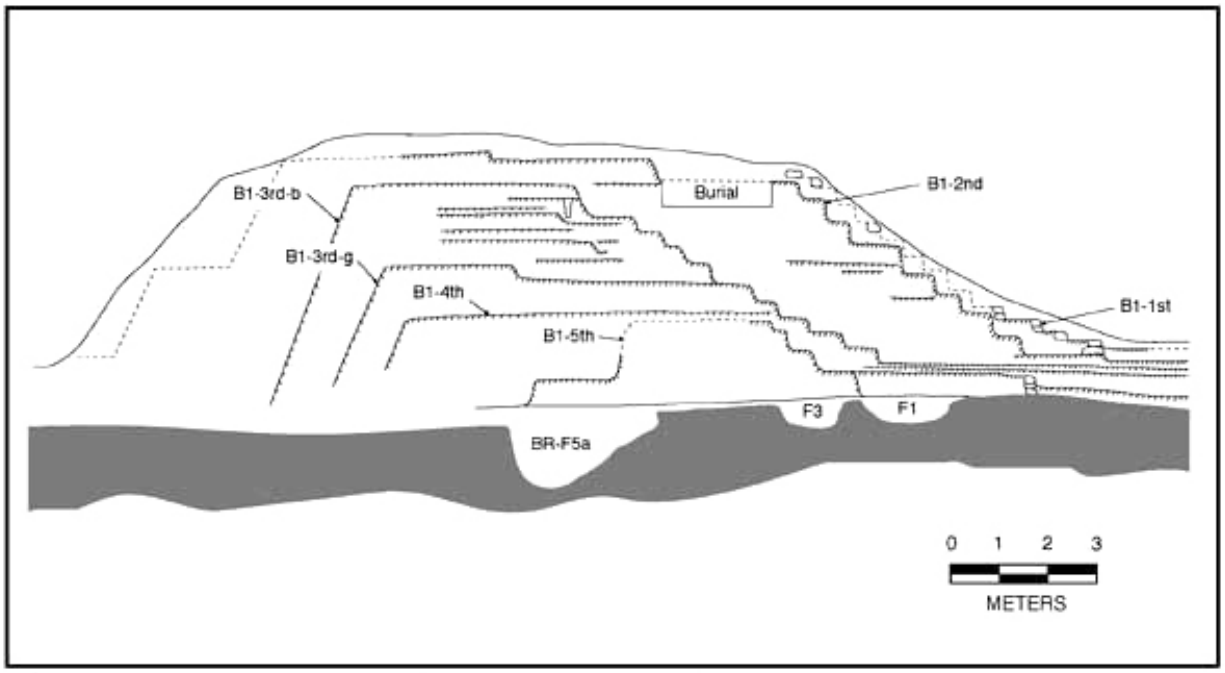

Figure 4. Profile of Structure B1 at Blackman Eddy, Belize.

The 2001 Field Season

The primary objectives of the 2001 BVAP field season were to: (1) determine the extent of bedrock-level postholes observed in previous field seasons; (2) investigate any associated deposits and features and; (3) firmly establish a chronology for these bedrock deposits through ceramic and radiocarbon analyses.

Previous excavations had not exposed sufficient areas of bedrock to clearly discern any posthole patterns. The removal of the remaining portions of Structures B1-5th, 6th, and 7th revealed an extensive series of bedrock level buildings and associated features. Ceramic and radiocarbon analyses, firmly establish a construction date for these buildings and features in what we have defined as the Kanocha Phase (1200-850 B.C.) (Table 1 and Table 2). This phase pre-dates the early facet Jenny Creek phase, the earliest phase recognized at the nearby site of Barton Ramie (Gifford, 1970; 1976; Sharer, 1976; Willey *et al*., 1965).

The terminal Early Formative and early Middle Formative sequence at Blackman Eddy consists of a bedrock level occupation evidenced by a series of postholes cut into bedrock and low apsidal tamped-earth platforms that supported pole and thatch buildings (Figure 5). These are designated Structure B1-8th through 11th. All appear to be circular or apsidal in outline. A piece of pole-impressed daub plaster with a trace of a red hematite stripe was recovered in the excavations. A Cunil phase building at Cahal Pech, B4 10c-sub, was decorated in a similar manner (Awe, 1992). These first

occupants modified bedrock by leveling and filling in low areas. In some areas bedrock was used as a living surface. Midden material immediately to the south, associated with what was probably the final phase of the postholes, contained lithic debris, ceramics, and numerous freshwater shells.

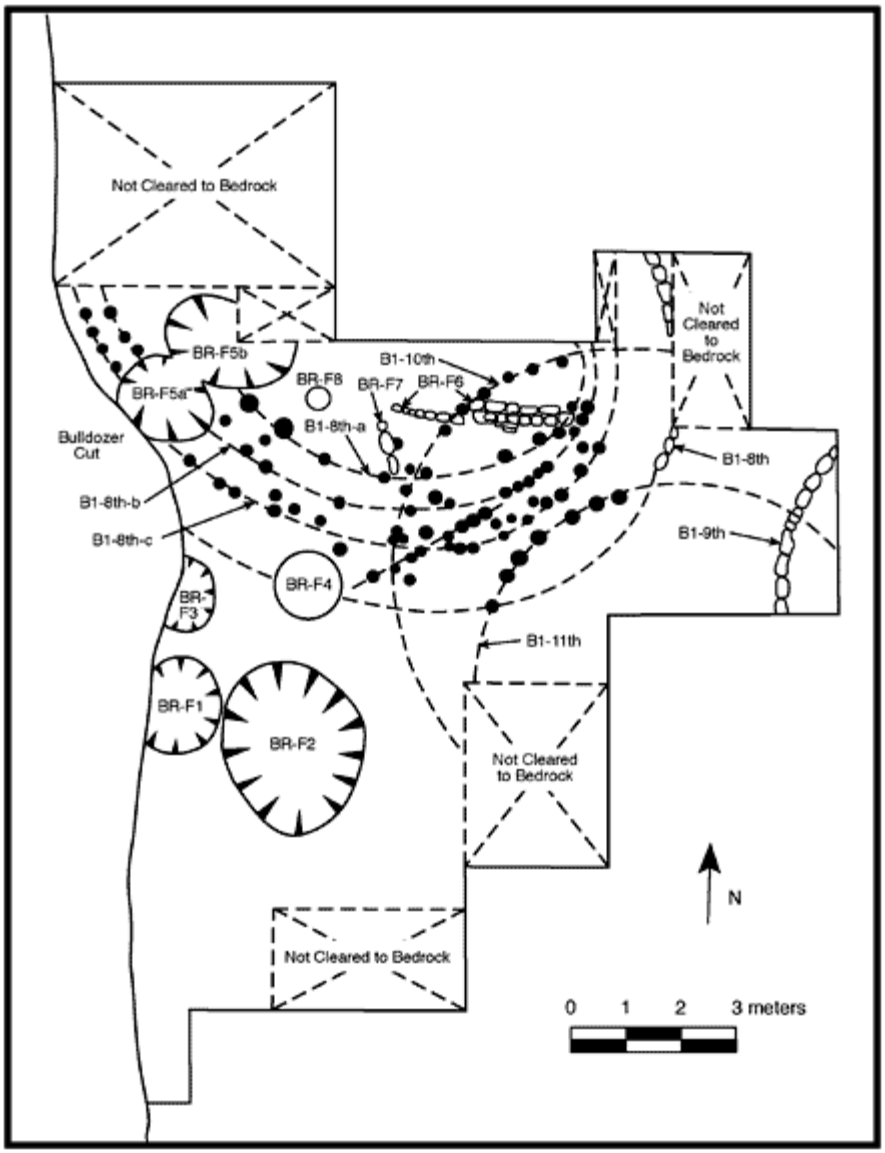

Figure 5. Plan view of bedrock features at Blackman Eddy.

Although the construction sequence of Structures B1-8th through 11th could not be determined with absolute certainty, B1-10th and 11th probably preceded the construction of B1-8th and 9th both of which are elevated platforms representing a relatively higher input of labor. B1-10th and 11th are both bedrock level buildings. Structures B1-8th and 9th are probably contemporaneous.

Similar early deposits have been found at Cuello, Colha, Nakbe, and Cahal Pech (Awe, 1992; Powis, 1996) and Pacbitun (Hohmann *et al*., 1999; Hohmann and Powis, 1999). At Cuello, the initial occupation is marked by cultural debris mixed and impacted into the old ground surface associated with postholes excavated into bedrock (Gerhardt and Hammond, 1991). The earliest architectural features found at Nakbe consist of hard packed earthen floors overlying a buried paleosol level (Hansen, 1998). Postholes carved into bedrock were also associated with these early constructions. Like the initial occupation at Blackman Eddy, these constructions were built directly on the ground surface. In the case of Blackman Eddy, low areas of the ground surface appear to have been filled in. Radiocarbon samples from the initial occupation at Nakbe consistently range between 1400 B.C.-1000 B.C. calibrated (Hansen, 1998). These dates are consistent with the radiocarbon data from Blackman Eddy (Table 2).

Table 1. Construction Phases of Structure B1 at Blackman Eddy

Structure	Period	Ceramic Phase	Date
B1-1st	Late Classic	Tiger Run	600 A.D.-900 A.D.
B1-2nd-a	Early Classic	Hermitage	300 A.D.-600 A.D.
B1-2nd-b	Late Preclassic	Mount Hope	300 B.C.-300 A.D.
B1-3rd-a	Late Preclassic	Barton Creek	300 B.C.-300 A.D.
B1-3rd-b	Late Preclassic	Barton Creek	300 B.C.-300 A.D.
B1-3rd-c	Late Preclassic	Barton Creek	300 B.C.-300 A.D.
B1-3rd-d	Late Preclassic	Barton Creek	300 B.C.-300 A.D.
B1-3rd-e	Middle Formative (late)	LJC	650 B.C.-300 B.C.
B1-3rd-f	Middle Formative (late)	LJC	650 B.C.-300 B.C.
B1-3rd-g	Middle Formative (late)	LJC	650 B.C.-300 B.C.
B1-4th	Middle Formative (early)	EJC	850 B.C.-650 B.C.
B1-5th	Middle Formative (early)	EJC	850 B.C.-650 B.C.
B1-6th	Middle Formative (early)	EJC	850 B.C.-650 B.C.
B1-7th	Middle Formative (early)	EJC	850 B.C.-650 B.C.
B1-8th	Middle Formative (early)	Kanocha	850 B.C.-1200 B.C.
B1-9th	Middle Formative (early)	Kanocha	850 B.C.-1200 B.C.
B1-10th	Middle Formative (early)	Kanocha	850 B.C.-1200 B.C.
B1-11th	Middle Formative (early)	Kanocha	850 B.C.-1200 B.C.

Table 2. Radiocarbon dates from Blackman Eddy, Belize						
Location	**Phase**	**Beta #**	**Radiocarbon age – BP**	**Radiocarbon age – bc**	**Calibrated 1 sigma – BC**	**Calibrated 2 sigma – BC**
BR-F3	Kanocha	122281	2990±60	1040±60	1295-1120	1395-1015
BR-F5b	Kanocha	162573	2800±40	850±40	1000-900	1030-840
BR-F5a	Kanocha	159142	2750±40	800±40	920-830	990-820
Bedrock	Kanocha	122282	2730±50	780±50	910-820	980-805
BR-F2	EJC	162571	2420±40	470±40	740-710 and 530-410	760-620 and 590-400
BR-F1	EJC	162570	2460±40	510±40	760-620 and 590-420	780-410
BR-F4	EJC	159144	2450±40	500±40	760-640 and 560-420	780-400
B1-7th	EJC	162572	2340±60	390±60	410-380	740-710 and 530-360 and 290-230
B1-6th	EJC	159146	2430±40	480±40	750-700 and 540-410	770-400
B1-5th	EJC	122279	2500±50	550±50	780-515	795-410
B1-5th	EJC	103956	2440±60	490±60	760-635 and 560-405	785-390
B1-4th	EJC	103959	2480±50	530±50	775-485 and 465-425	790-405
B1-3rd	LJC	159141	2290±40	340±40	390-370	400-350 and 300-220
B1-3rd	LJC	159145	2240±40	290±40	380-350 and 310-210	390-190
B1-3rd	LJC	159147	2190±40	240±40	360-280 and 240-190	380-160

Structures B1-10th and B1-11th

These buildings appear to represent the earliest occupation of the site. Both are circular in outline. Because the B1-10th and B1-11th posthole patterns overlap, we were unable to determine their relative construction sequence. B1-11th is represented by a series of seven postholes excavated into bedrock (Figure 5). The mean diameter of these postholes is 21.3 cm, considerably larger than the diameters of the other Kanocha buildings. This posthole pattern is circular in shape and represents a pole and thatch building approximately 6.2 m in diameter. The south end of the posthole arc extends outside the limits of the area cleared to bedrock. The north end of the arc had been

impacted by later constructions. B1-10th is composed of a series of at least ten bedrock postholes with a mean posthole diameter of 13.3 cm. The diameter of this building would have been approximately 6.2 m (Figure 5).

Structures B1-8th and B1-9th

These platforms are of similar size and construction and appear to be contemporaneous. As can be seen in Figure 5 only a portion of B1-9th was exposed. Both are apsidal substructural platforms built directly on bedrock. A thin layer of midden material was observed between the two platforms. This midden contained ash, ceramic debris, chert cores, mano fragment, stingray spine, and tubular bone ring. This midden did not extend underneath the platforms, supporting the suggestion of contemporanaity of the platforms. The platform edges are composed of roughly trimmed limestone slabs, measuring approximately 28 x 18 x 6 cm. The platform surfaces were composed of tamped earth/marl. Medium to dark gray clay was applied to the exterior of the B1-8th platform retaining wall, a technique similar to that seen for the south and west sides of Structure B1-7th. Construction fill within the platforms consisted of a brown soil matrix with occasional interspersed limestone rubble. Within the excavation area, bedrock slopes downward to the north and east. On the northeastern edge of B1-8th the height of the platform retaining wall was approximately 50 cm and thus the platform surface was well above bedrock. As was expected, no bedrock postholes were observed in this area. Postholes were observed on the southern edge where the platform surface was at bedrock level. Apparently, the inhabitants chose to locate this structure at the extreme north end of the ridge possibly to take advantage of the breeze.

Structure B1-8th has at lest three sub-construction phases designated B-8th-a, B1-8th-b, and B1-8th-c (Figure 5). The presumed sequence places B-8th-a as the earliest and B1-8th-c as the most recent. The postholes of B1-8th-a are inset 1.8 m from the platform edge. The mean posthole diameter is 16.5 cm. Two of the postholes are considerably larger than the others. Removing these, the mean diameter is 13.8 cm. The B1-8th-b postholes (mean diameter 13.4 cm) are inset 1.6 m from the platform edge. The B1-8th-c postholes (mean diameter 14.5 cm) are inset 1.1 m from the platform edge. All three sub-phases are apsidal in plan and represent perishable pole and thatch buildings measuring approximately 10.0 m by 7.5 m.

Domestic related material culture and features were associated with these early structures indicating a probable domestic function. Alternatively, the presence of exotic materials and the absence of burials within the platforms may suggest that these early deposits represent public and sacred space within the community from the initial settlement. Further investigation is necessary in order to better understand the nature and function of the B1-8th through B1-11th buildings.

Plaza Test Trench

A test trench (1.0 m x 5.0 m) was placed in Plaza B just to the south of Structure B1 to determine whether or not similar bedrock level buildings extended to the south (Figure 2). No evidence of Middle Formative buildings or features was revealed.

BR-F3

This feature is a circular bedrock basin approximately 1.28 m in diameter and 0.5 m in depth (Figure 5). The basin surface appeared to have been intentionally smoothed. The feature fill was dark and midden-like, containing ceramic sherds, chert flakes, and numerous freshwater shells. It is similar to BR-F5a and BR-F5b and may have originally functioned as a small chultun or storage pit. Alternatively, it may have been created to catch and hold water. Its final use was as a refuse pit.

BR-5a and BR-5b

Both BR-F5a and BR-F5b are large, more or less circular, pits excavated into bedrock. Both appear to have originally functioned as a chultun that was later used as a refuse dump. The basal portions of each have been smoothed. The upper walls of BR-F5b had vertical scored gouge marks, evidence that it had been dug out with a sharpened stick. The sidewalls of both are concave and thus have overhanging edges. There appeared to be breakage along the edges, indicating that the openings were once more constricted than at present.

BR-F5a is approximately 65 cm in diameter and 80 cm in depth. The dirt fill was grayish-black in color and midden-like. At the base of the feature, resting directly on bedrock, was a complete colander vessel (Figure 6). The interior basal surface of the vessel in and around the area of the drain holes was encrusted with a layer of white lime. Colanders probably functioned as containers to rinse off lime soaked corn in the preparation of maize gruel or to soften maize prior to grinding. Other artifacts from BR-F5a included numerous chert micro-drills and burins, biconically drilled marine shell disk beads, marine shell detritus, freshwater clam and jute shells, small bone fragments, ceramic sherds, and carbon (Figure 7, Figure 8, and Figure 9).

Figure 6. Kanocha Phase (1200-850 B.C.) colander.

Figure 7. Chert drills.

Figure 8. Marine shell beads.

Figure 9. Marine shell disk beads.

BR-F5b is larger, measuring 2.4 m x 1.6 m and 91 cm in depth. Portions of a limestone block partition wall were found abutting the north edge of the chamber. Numerous limestone blocks of similar size were found at the base of the western half of the feature and may represent wall collapse. Numerous fire-cracked pieces of limestone and carbon were recovered in the eastern half of the chamber along its base. Distinct, dense concentrations (possibly basket-loads) of freshwater jute and bivalve shells were found along the southern edge of the chamber. The freshwater shells from this deposit were noticeably larger and thicker than those from later deposits, possibly a response to overexploitation or environmental change.

The fill of the chamber was layered representing a series of distinct depositional events probably spread out over time. The clustering of artifacts and differential fill suggest its periodic use as a refuse dump. The upper portion of the fill was blackish gray to brown in color. The middle section of fill was a darker brownish gray color and the fill at the base was gray to dark gray silty-clay fine laminates that appeared to have been deposited by water. Perhaps after its use as a chultun it lay exposed for some time allowing silty-clay soils to accumulate at its base. Alternatively, after its use as a chultun it may have been used as a water catchment. The smoothing of the limestone bedrock on its base and lower walls (if not smoothed by hand) may be the result of the episodic washing and pooling of water.

Numerous bones from a large mammal (possibly tapir or white-tailed deer) were recovered in the fill. Body parts included vertebrae, scapulae, metapodials, carpals, and long bones in addition to a variety of bones from smaller species. Artifacts included bone needles; complete and fragmented manos; metate fragments; chert flakes, cores and micro-drills; ceramic sherds; and a stone tecomate (Figure 10 and Figure 11, shown below). A tabular limestone slab with three pecked circular depressions was recovered at the base of the chamber. These depressions are approximately 4-5 cm in diameter and 2.5 to 4 cm in depth.

Two radiocarbon dates were obtained from the base of BR-F5 (Beta-162573 850 ± 40 b.c., cal B.C. 1000-900; and Beta-159142 800 ± 40 b.c., cal B.C. 920-830) (Table 2).

Figure 10. Middle Formative bone artifacts.

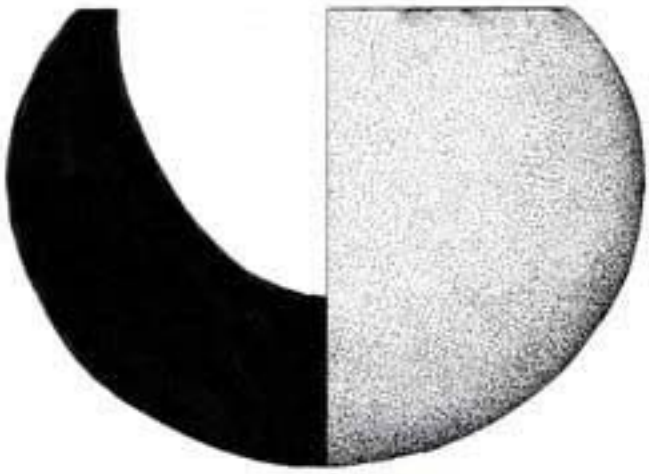

Figure 11. Kanocha Phase (1200-850 B.C.) stone tecomate.

BR-F6

This feature is a coursed limestone alignment (3.4 m long) oriented on an east-west axis across the bedrock surface (Figure 5). At present there is no direct association of the alignment with any of the recognized construction phases. It may have been part of

a north wall of a rectangular platform that extended southward. It is located directly on bedrock just north of the area where bedrock starts to slope to the north. On the west end of the alignment (where bedrock begins to slope upward) instead of using trimmed stones, bedrock was carved to mimic the shape and height of the stone alignment. The uppermost courses of the wall are 43 cm above bedrock. These trimmed stones are approximately 20 x 14 x 7 cm.

The earliest trimmed limestone platforms of the Structure B1 sequence are B-8th and B1-9th. Both are apsidal in shape. The earlier building phases of B1 are represented by circular posthole patterns (B1-10th and B11-11th). The earliest rectangular plan of the sequence is B1-7th. BR-F6 may represent the remnants of an even earlier rectangular platform, setting the pattern for the structures that followed.

The Kanocha Phase (1200-850 B.C.)

The Kanocha phase represents the initial occupation of Blackman Eddy. Two wares are present in the Kanocha Complex; one utilitarian with calcite and quartzite temper and the other a dull-slipped ware characterized by ash temper (Figure 6 and Figure 12). Major forms include; lugged and strap-handled jars with short necks, tecomates, colanders, bowls of various forms, and flat-bottom plates with out-curving sides and wide everted rims. Decoration techniques include appliqué fillets and post-slip incising. The predominant utilitarian ware shows strong parallels to Jocote of Jenny Creek and appears to be its developmental precursor. Some of the dull-slipped types show strong developmental ties to the succeeding Mars Orange group as well.

Several aspects of these ceramics such as dating, origins, and relationship to subsequent complexes have been the subject of considerable discussion and debate. The radiocarbon dates from Blackman Eddy (Table 2, Figure 13) support the proposed beginning date for the appearance of these ceramics at 1000 B.C. and may appear as early as 1200 B.C. The same is true for the Cunil Complex at Cahal Pech (Awe, 1992). Prior to these discoveries, the earliest deposits of the valley were those of early facet Jenny Creek at 800 B.C. (Gifford, 1976) and thus, the Kanocha phase at Blackman Eddy and Cunil phase at Cahal Pech both predate Jenny Creek. These early ceramic types have also been recovered at Xunantunich (Strelow and LeCount, 2001), Pacbitun (Powis, personal communication, 2000), and in the BVAP excavations at Floral Park.

The issue of origins is more complex. There are four basic possibilities: (1) these ceramics were developed *in-situ* with no, or little, outside influence; (2) the underlying concepts of ceramic production were introduced into the valley from Maya groups in adjoining regions; (3) ceramics and/or the underlying concepts of ceramic production were introduced into the valley from non-Maya groups in adjoining regions or beyond through interaction and; (4) this portion of the Maya Lowlands was settled by non-Maya groups, bringing with them the concepts of ceramic production.

Figure 12. Kanocha Phase (1200-850 B.C.) sherds.

The iconography and general quality of the Kanocha phase ceramics represent a well-developed technology; not a first attempt at producing ceramics. There is no evidence for ceramic experimentation. The first possibility above, can reasonably be ruled out on the basis of clear iconographic ties to other regions of Mesoamerica. Moreover, non-local exotics were encountered within the Kanocha phase at Blackman Eddy and the Cunil phase at Cahal Pech (Awe, 1992) suggesting interaction with outside regions. With ceramic producing populations surrounding the Maya Lowlands it seems logical

that the early inhabitants of the valley would have had an understanding of ceramic technology. The fact that cultigens and associated technologies were spreading all over Mesoamerica is ample evidence of considerable interaction even at an early date.

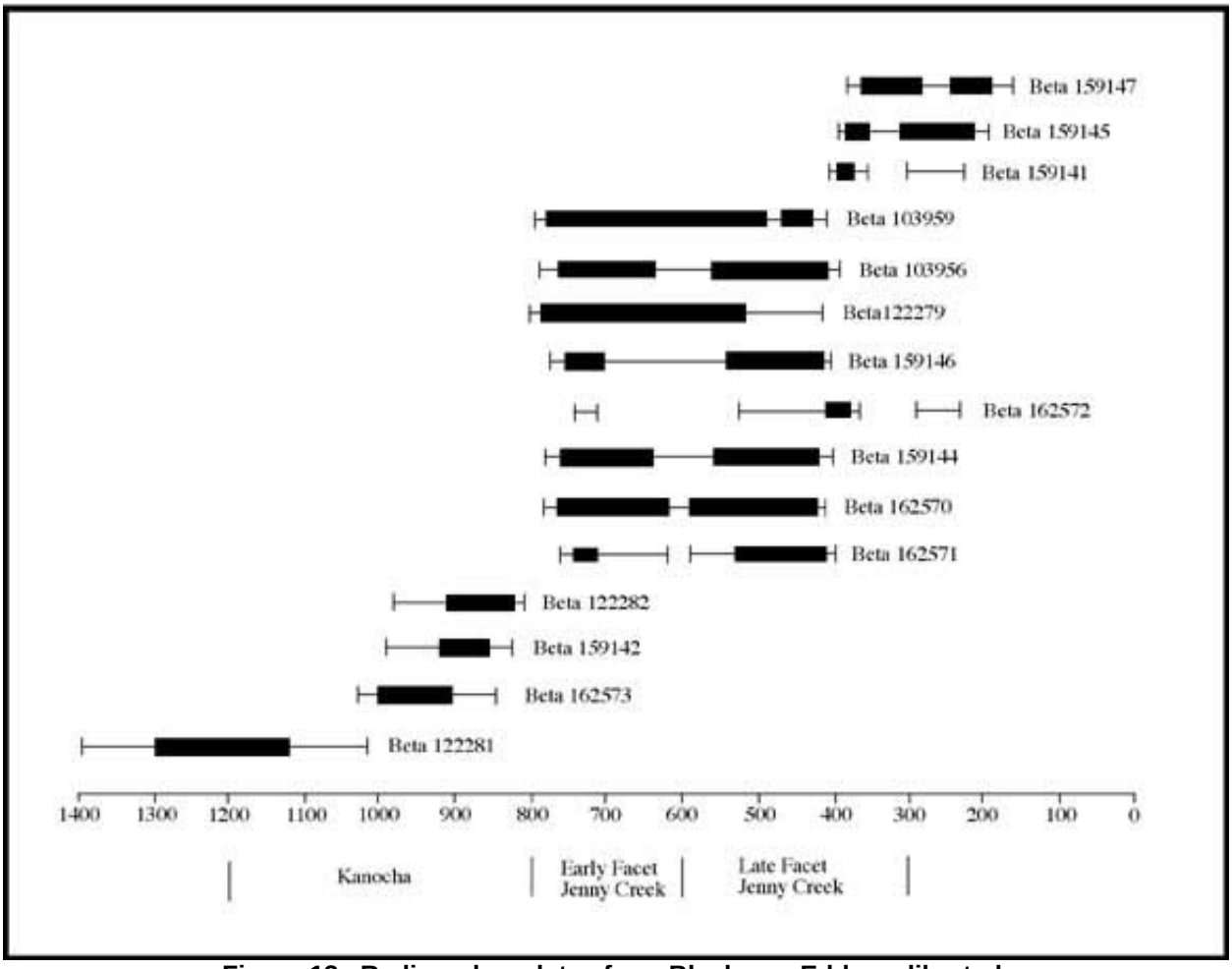

Figure 13. Radiocarbon dates from Blackman Eddy–calibrated.

The second possibility, that the underlying concepts of ceramic production were introduced into the valley from Maya groups in adjoining areas, flows from "conventional wisdom" among Mayanists in a very simple general working assumption that if something occurs in the Maya Lowlands it must be Maya. We would expect to find preceramic deposits in the valley indicating an earlier lifeway more dependent on wild resources. Such finds are present, but scarce, and the density and significance of these Archaic valley populations has not been determined. Compelling evidence that the early settled villagers were well adapted to the local environment of the valley lends support to this possibility.

Distinct external influences on the Classic, Postclassic, and Historic periods are well documented and thus the third and fourth possibilities, both of which involve non-Maya groups, should be given careful consideration. Ball and Taschek (2000; in press) present an intriguing reassessment of the Middle Formative ceramics of the valley that may shed some light on this issue. They suggest that the earliest permanent settlers of the valley were not Maya or at least not the Maya of the Classic period. Furthermore, they suggest that the ceramics in use between 950-500 B.C. of the valley are not of a single complex, the result of a "closed-system", but rather represent multi-system composites.

> While the Kanluk [Cahal Pech Jenny Creek] and Jenny Creek ceramic complexes as defined are based on stratigraphic depositional associations, they do not represent one-to-one equivalents of local Middle Preclassic production-consumption assemblages but depositional composites made up of locally manufactured and used pottery plus additions resulting from local exchange, long-distance trade, possible gifting, the curation of heirlooms or antique vessels, and other processes. The evidence for some of these processes is easily recognized, that for others is not. However, what should be realized is that the compositional character of a Middle Preclassic complex like Jenny Creek or Kanluk really is no different from that of a central lowlands Terminal Classic complex that includes fine orange, plumbate, or thin-slate ceramics, or a northern lowlands Late Complex with inclusions of Palmar or Petkanche group polychromes or fine-paste wares from outside the immediate region of archaeological discovery. (Ball and Taschek, 2000:6)

According to their argument, what has been regarded as a single complex may actually be made up of two distinct production systems; one Maya, the other non-Maya. The ceramic groups that make up these complexes appear to be a part of a "generic Middle Preclassic" ceramic tradition with a wide distribution that extends across the isthmus as opposed to a "Maya Middle Preclassic" tradition. This pattern would be analogous to the situation in the Copan Valley where the earliest ceramics (Rayo and Gordon complexes) have been linked to complexes of Chalchuapa (Demarest, 1987; Fash, 1991), and Xe ceramics linked to Mixe-Zoque groups most likely from eastern Chiapas or the northern highlands of Guatemala (Andrews, 1990). In these models, the Mixe-Zoque groups were absorbed or replaced by Maya groups expanding from Mamom based ceramic systems which had developed out of Peten based or Swasey pre-Mamom roots. The validity of this model for the Belize Valley ultimately rests on a comprehensive analysis of the ceramic material coupled with a thorough comparison to neighboring areas and beyond. Such an analysis is currently in progress (Joseph Ball, personal communication, 2001).

In the initial description of the Cunil phase at Cahal Pech, Awe (1992) describes a set of motifs and elements of the incised types as well as those on greenstone artifacts of the same phase. Subsequently, these motifs were the subject of a more detailed analysis and the incised types were defined as the Chitam sub-complex of Cunil (Cheetham, 1998). The Kan cross and avian-serpent have been identified on the Kanocha phase

ceramics at Blackman Eddy (Figure 14). Both are part of a widespread generic Middle Formative system found in several regions of Mesoamerica including; Chiapas, Pacific Coast, Gulf Coast, El Salvador, Morelos, Valley of Mexico, and Oaxaca. The Kanocha (Figures 15, 16, 17, and 18, shown below) and Cunil phase figurines are stylistically similar to examples from the Northern Guatemalan highlands, Western El Salvador, and Central Chiapas and are quite unlike those from the Gulf Coast and the Southeastern Pacific Coast (Awe, 1992; Cheetham, 1998).

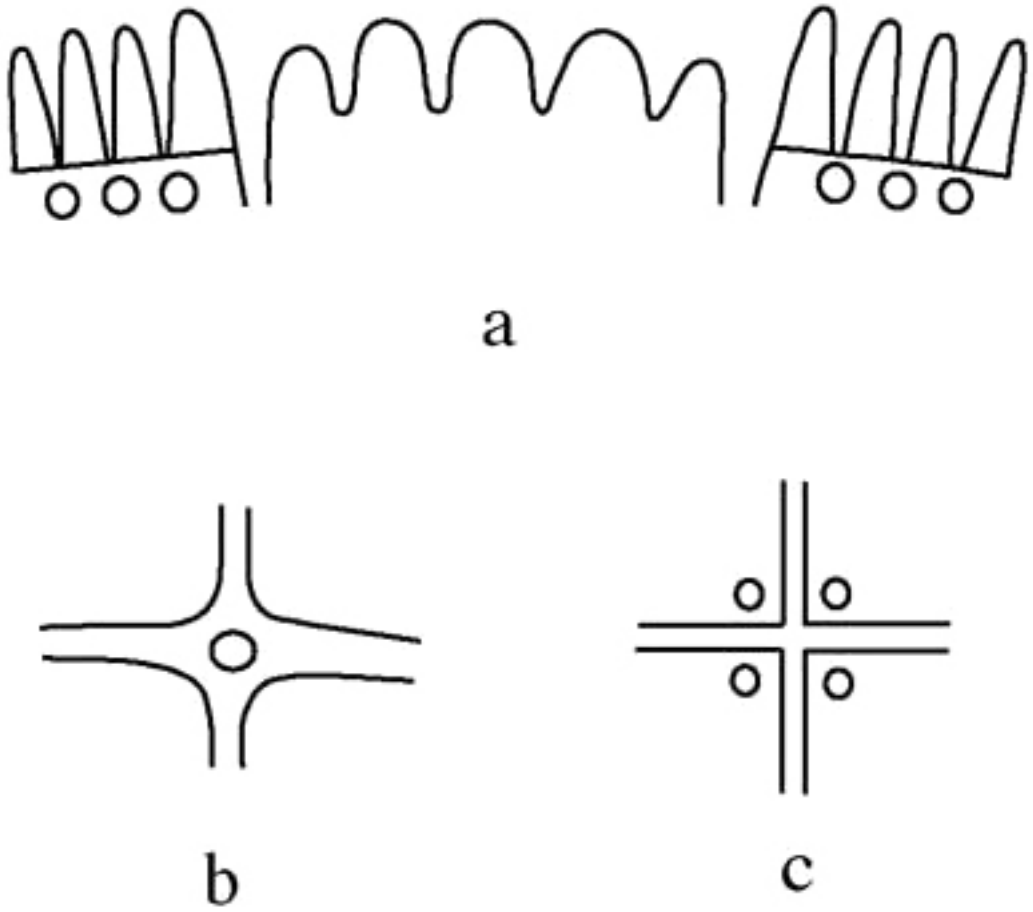

Figure 14. Motifs on Kanocha and Cunil ceramics:
(a) avian-serpent, (b) quadripartite motif, (c) quadripartite motif.

Figure 15. Kanocha Phase (1200-850 B.C.) figurine.

Figure 16. Kanocha Phase (1200-850 B.C.) figurine.

Figure 17. Kanocha Phase (1200-850 B.C.) figurine.

Figure 18. Kanocha Phase (1200-850 B.C.) figurine.

The distribution of these motifs indicates that the iconographic program was not Maya in origin but rather was a part of a larger pan-Mesoamerican Middle Formative symbol system. These symbols are not a part of the Swasey Complex in Northern Belize (Kosakowsky, 1987; Kosakowsky and Pring, 1998). Furthermore, they are not a part of Jenny Creek at Barton Ramie or Blackman Eddy, Kanluk (Jenny Creek at Cahal Pech), Mamom, or Bolay. Cheetham (1998) believes these pan-Mesoamerican motifs were adopted by the resident Maya population of the valley. Although we do not reject this hypothesis, we leave open the possibility that the earliest settlers of the valley (Maya or other) arrived with these iconographic concepts as a part of their cultural baggage. Given the above reassessment by Ball and Taschek and the possible problems with our current understanding of who the earliest settlers of the valley were, where they might have come from, and what groups they may have been influenced by, we reserve judgment on the possible explanations for the origin of the early ceramics of the valley pending further analysis and excavation.

Kanocha artifacts include retouched flakes, scrapers, drills, burins, chert macro-blades, hammerstones, quartzite and granite manos, tecomate stone bowls, polished greenestone, marine and freshwater shell disk beads, bone needles, bone rings, stingray spines, stone pendants, ceramic ocarinas, and molded ceramic figurines. From the establishment of their initial settlement, the early Middle Formative inhabitants of the valley were involved in long distance trade. Exotic goods include greenstone, obsidian, and marine shell. The presence of greenstone from the Blackman Eddy Kanocha phase and Cahal Pech Cunil phase (Awe, 1992) is one of the earliest uses of greenstone in

the Maya Lowlands. The marine shells are predominantly Strombus, available on the Caribbean coast. The early occurrence and diverse origins of these exotic goods imply that an extensive system of long distance trade and exchange had been established in the Maya Lowlands by the beginning of the first millennia B.C.

Discussion

The initial architectural constructions at Blackman Eddy are quite modest. It is a hilltop settlement overlooking the floodplain below. These early constructions consisted of simple pole and thatch buildings at or slightly above ground level. Subsequent Kanocha phase buildings consisted of low stone-edged tamped marl platforms upon which perishable buildings were constructed. These buildings were clustered and had associated tamped earth patio surfaces. Immediately following this phase, lime plaster floors and simple stone masonry make their appearance. Some residents had access to exotic materials such as obsidian, greenstone, and marine shell. The increased complexity of architecture and the associated increased labor investment coupled with the presence of exotics and the ceramic vessels that carry iconographic information are indicative of the emergence of social differentiation towards the end of the Kanocha phase.

Artifacts include a wide range of chipped stone tools and a variety of ceramic vessel forms including jars, bowls, and plates. The presence of grinding tools and colanders indicate the use of maize. The evidence of feasting suggest communal ritual activities possibly functioning as integrative activities to form social bonds, and allow redistribution of goods through local giftgiving and exchange networks. A rich faunal assemblage demonstrates the use of a wide range of animal foods as well. Exotics include obsidian, marine shell, and greenstone, indicating that these early settled groups were a part of an extensive system of exchange. The iconographic motifs indicate participation in a pan-Mesoamerican symbol system. The collection of new data as well as continuing analysis of existing data should prove productive in answering questions about the origins and inter-regional relationships of this early period as well as the role of these villagers in shaping subsequent phases.

Conclusion

Primary objectives of the recent investigations at Blackman Eddy were to augment the emerging Formative period data base as evidenced at the site of Cahal Pech (Awe, 1992). At the start of these initiatives, what was known of Formative occupation of the area was essentially what Willey and his colleagues (1965) had discovered in the 1950s. More recently, Ball and Taschek (1986), Healy (1990), Ford (1990), and Ford and Fedick (1992) recorded evidence of Formative occupation at Buenavista del Cayo, Pacbitun, and the area to the northwest of the Belize River, but these data were represented by little more than ceramic remains. Collectively, the information gained

from these sites indicated that Jenny Creek pottery represented the earliest ceramic tradition of the region. These ceramics however, had not been isolated stratigraphically and its early Middle Formative date had been determined solely by seriation (Willey *et al*., 1965:562-563; Gifford, 1976). In his discussion of early facet Jenny Creek pottery Sharer acknowledged this problem.

"It should be stressed that the following facet definitions are minimal, that is, further excavations in the Belize Valley area should add to and refine this picture of the initial pottery tradition in the eastern Maya Lowlands". (Sharer, 1976:61)

Prior to the excavations at Blackman Eddy (Brown and Garber, 1998; Brown *et al*., 2000; Garber, 1997; Garber *et al*., 2001) and Cahal Pech (Awe, 1992; Cheetham, 1995; 1996) there were no data on securely dated architecture or settlements prior to 850 B.C. Data regarding interaction spheres and long distance trade were limited as well. In part due to this limited data base, Willey *et al*. (1965), Gifford (1970) and Sharer and Gifford (1970) suggested that sociopolitical complexity did not develop in the upper Belize Valley until the terminal Late Preclassic. Additionally, they argued that this development was probably sparked by outside influence from the highlands.

The excavations at Blackman Eddy have revealed a developmental sequence of architectural construction initiated at approximately 1200 B.C. with the construction of pole and thatch domestic buildings built on and slightly above bedrock. Through time, the buildings increased in complexity. By the beginning of the early Jenny Creek phase (850 B.C.), the inhabitants of the valley were constructing lime-plastered, cut masonry, monumental public architecture. Participation in a far-reaching interaction sphere has been documented for these earliest settled groups. Evidence for the importation of exotic goods from the Guatemalan highlands, the Motagua Valley, and the Caribbean coast predate the late Middle Formative record for these activities at Barton Ramie (Willey *et al*., 1965).

The presence of dedication and termination offerings, feasting debris, figurines, carved greenstone, and the incised elements and motifs of the early ceramics, indicate the importance of symbolism and ritual ideology at an early date in the Lowlands. The iconographic motifs of the Kanocha phase at Blackman Eddy indicate that the earliest settled groups of the Belize Valley participated in a pan-Mesoamerican symbol system. This is evident in the Cunil phase at Cahal Pech as well (Awe, 1992; Cheetham, 1998).

The investigations at Blackman Eddy have revealed Jenny Creek phase material in sealed stratigraphic context. The associated radiocarbon dates for these remains confirm the early Middle Formative date (850 B.C.-650 B.C) for early Jenny Creek ceramic remains (Table 2). Stratigraphically beneath, and thus pre-dating, these remains are deposits of the Kanocha phase (1200 B.C.-850 B.C.) at Blackman Eddy. There are several important questions about this phase that remain unanswered. These concern the origins of the ceramic types, their developmental relationships to Jenny Creek, and their relationship to the early ceramics of the Peten and northern Belize.

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