
20 THE LATE ARCHAIC OCCUPATION OF NORTHERN BELIZE: NEW ARCHAEOLOGICAL EXCAVATION DATA

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In this paper, I present new data that augment our understanding of Late Archaic occupation in northern Belize. Excavated data are presented from aceramic components at four sites – Laguna de On, Caye Coco, Fred Smith and San Estevan. These data are contextualized in terms of pollen data that indicate widespread forest clearing began by 2500 BCE. Corroborating evidence indicates the concurrent use of tools, such as the well-known constricted uniface, that were worked from macro-flakes and show use wear consistent with cutting wood and digging earth. While these pollen data bracket the beginning of the Late Archaic, the appearance of the first ceramics, at approximately 800 or 900 BCE, bracket the end of this period. Therefore, for over a millennium and a half the inhabitants of northern Belize employed a unique lithic technology, dramatically altered their environment, yet did not adopt ceramic technology nor village life. Despite the evidence of such developments in other parts of Mesoamerica during the Early Formative, all available data from northern Belize indicate a stable Late Archaic adaptation, which lasted until the beginning of the Middle Formative period.

Introduction

The origins of agriculture and a sedentary way of life are fundamental anthropological concerns. Inquiry into these processes began in Mesoamerica with excavations in a number of locations in highland Mexico (e.g., Byers 1967; Flannery 1986; MacNeish et al. 1967). More recent studies have targeted the tropical lowlands. Regardless of the location of study, understanding this fundamental transition requires that the latest mobile preceramic horticulturists be documented and their adaptation compared with the earliest sedentary, ceramic using peoples (Clark and Cheetham 2002). While a picture of the first ceramic using cultures in various parts of Mesoamerica is emerging, their Late Archaic predecessors are known archaeologically in the lowlands primarily from the Soconusco region of Chiapas (Voorhies 1976; Micheals and Voorhies 1999) and from northern Belize (Hester et al. 1996; Pohl et al. 1996; Rosenswig and Masson 2001). Ironically, these are respectively some of the first and

the last regions of Mesoamerica where sedentism and ceramic use emerged.

In northern Belize, much of what we know of the Late Archaic was documented by the Colha Pre-ceramic Project (Kelly 1993; Hester et al. 1996; Iceland and Hester 1996) directed by Thomas Hester and Harry Shaffer, and is contained in Harry Iceland's (1997) dissertation (see Figure 1). At Colha, the only documented Archaic deposit in *primary archaeological context* is a lithic production surface with evidence of constricted uniface debris found under another surface with Middle Formative lithic debris. In addition, the lithic assemblage from nearby Pulltrouser Swamp contains Archaic remains recovered with dates that place these deposits as late as 1000 BCE (Pohl et al. 1996).

In northern Belize, a distinctive lithic assemblage characterizes the Late Archaic that includes tools made from macro-flakes, many of which were unifacially worked (Gibson 1991; Iceland 1997: 11, 95-113). Constricted unifaces are the most distinctive

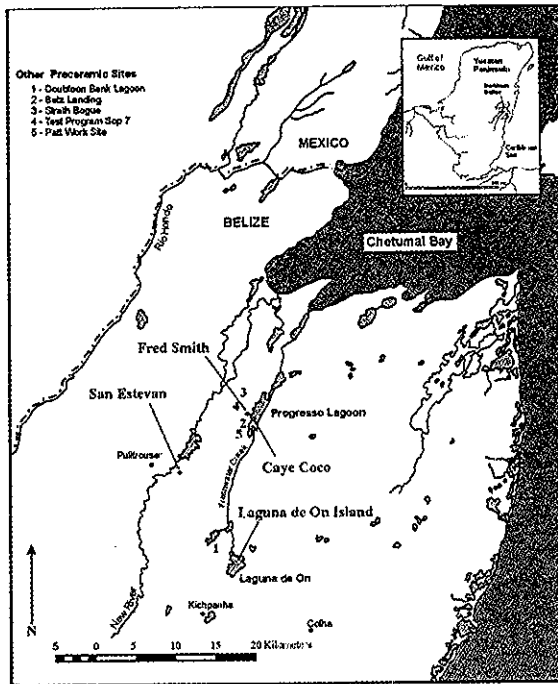


Figure 1. Location of northern Belize with Archaic sites indicated

and well known of these tools and use-wear analysis suggest they were used to dig soil and cut wood (Gibson 1991; Iceland 1997: 227-229; Hudler and Lohse 1994 in Iceland 1997). In addition, paleoecological reconstruction indicates that by approximately 2500 BCE, forest disturbance is evidenced by a decrease in tree pollen coinciding with increases in disturbance vegetation and charcoal remains (Jones 1994: 208; Jacob 1995; Pohl et al. 1996: 363). At approximately this time, maize and manioc were also present and soon thereafter so were cotton and chili peppers (Jones 1994; Piperno and Pearsall 1998: 300-303). Therefore, lithic assemblages and corroborating environmental data suggest that horticultural societies were using a specialized lithic technology to clear forests and plant crops for over a millennium and a half prior to the first use of ceramics in the region. However, missing, is excavated archaeological data from *primary context* that date to this time period

In this paper I present excavation data from Archaic components of three sites in the Freshwater Creek drainage of northern Belize and review lithic data from these sites that indicate a diverse technological assemblage was in use. I also present excavation data from the San Estevan site from 2002 that documents Middle and Late Formative deposits, possibly overlying an Archaic horizon.

Late Archaic Sites in the Freshwater Creek Drainage

From 1997 through 2001 the Belize Postclassic Project has documented seven new preceramic sites (Figure 2) in the Freshwater Creek drainage of northern Belize (Rosenswig and Masson 2001). Prior to this work, the Belize Archaic Archaeological Reconnaissance project (BAAR) documented a number of sites in the area (MacNeish 1981, 1982). In 1981 and 1982, a total of 46 m² were excavated on the west shore of Progresso Lagoon at the Betz Landing site (Zeitlin 1984) approximately 500 m south of the Fred Smith site. No features are reported from the excavations at Betz Landing but a distinct "reddish-brown soil" 20-40 cm below the surface produced dates of 1230 +/- 85 BCE and 1275 +/- 85 BCE (Zeitlin 1984: 364).

Laguna de On Island

In 1997, the Belize Postclassic Project began its second season of excavation at Laguna de On Island, near the headwaters of the Freshwater Creek drainage. At the base of Suboperation 19, we encountered an aceramic, white clay that contained macroflake tools, including a large retouched macro-flake and a heavily resharpened constricted uniface (Rosenswig and Safford 1998). Our excavations documented cultural deposits over 2 m in depth. The profile of Suboperation 19 documented a Postclassic pit that penetrated a preceramic stratum (see

Figures 3 and 4). Levels A through D all contain Postclassic remains. Level E was formed during the Postclassic period and appears to represent disturbance of earlier, aceramic deposits. Level F is a mottled light yellowish brown clay containing *in situ* burnt rocks and patinated lithics. This was the first time we encountered a preceramic deposit that contained heavily patinated unifacially worked lithic tools under a Maya site. A subsequent program of test auguring documented that a series of pit features existed on the island as the depth of bedrock varied between 65 and 245 cm below ground surface (Figure 5).

Caye Coco

The majority of known Archaic sites from the Freshwater Creek drainage have been documented at Progresso Lagoon. In 1999, a distinctive orange aceramic soil stratum (approximately 15 cm thick) containing patinated lithic flakes was documented 80 cm below ground surface in Suboperation 26 at Caye Coco to the north side of Late Postclassic Structure 2 (Figure 6) (Mazeau 2000; Rosenswig 2001). In 2000, I pursued the aceramic deposits discovered the previous year. A significantly resharpened and heavily patinated constricted uniface along with numerous flakes were recovered and a pit surface in Suboperation 40b under a Postclassic terrace to the east of Structure 2 (Figure 7). In 2001, a concerted effort was made to document the extents of this aceramic component of the site.

The aceramic component that we have documented at Caye Coco covers an area of approximately 150 sq m (see Figure 6) and it originates between 60 and 85 cm below the current ground surface. In 2001, a second pit feature was documented in Suboperation 26a, 24 m west of the first, as well as a single posthole in Suboperation 26b.

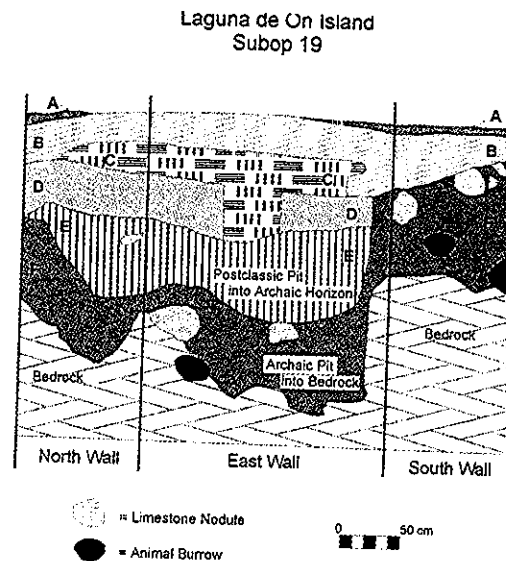


Figure 3 Profile of Suboperation 19 with stratigraphy labeled

Patinated, unifacial tools and flakes were recovered as well as two patinated hammer stones and evidence of worked oyster shell (Rosenswig 2002). These two pits and one posthole are the only domestic features in the Maya Lowlands that I am aware of from the Archaic period. The documented aceramic component of Caye Coco is likely much smaller than the original extent of the site during this time period. It appears as if the later occupants of the island scraped off topsoil in many places down to bedrock and removed earlier deposits in the process of leveling bedrock. At Suboperation 40f, a pocket of orange soil was preserved in a small depression in bedrock and ceramic-bearing levels directly overlay it. The surrounding bedrock was cut to an even, flat floor surface. At Colha, later period disturbance was common and many constricted uniface have been found



Figure 4. Photo of 1 x 4 m trench (Suboperation 19 and 19a) revealing Archaic component of Laguna de On Island in 1997.

incorporated into later period fill (Iceland 1997). This may only be one of many such pockets of preserved preceramic deposits on Caye Coco that we fortuitously encountered. Disturbed orange soils and patinated lithics were also found 100 m west of this at Suboperation 27 next to another Postclassic structure (Barrett 2000). The island of Caye Coco is 400 x 600 meters and we have only excavated a total area that covers approximately 300 sq m to bedrock.

The excavations of Suboperations 26a, 26b and 26c (Figure 8 and 9) provide fine-grained documentation of the stratigraphic position of the orange, preceramic horizon below Terminal Classic and Postclassic deposits. Suboperation 26a was excavated by arbitrary 10 cm levels and a patinated, plano-convex chopping tool was recovered 98 cm below ground surface and approximately 40 cm southeast of a pit feature of orange aceramic soil that intrudes

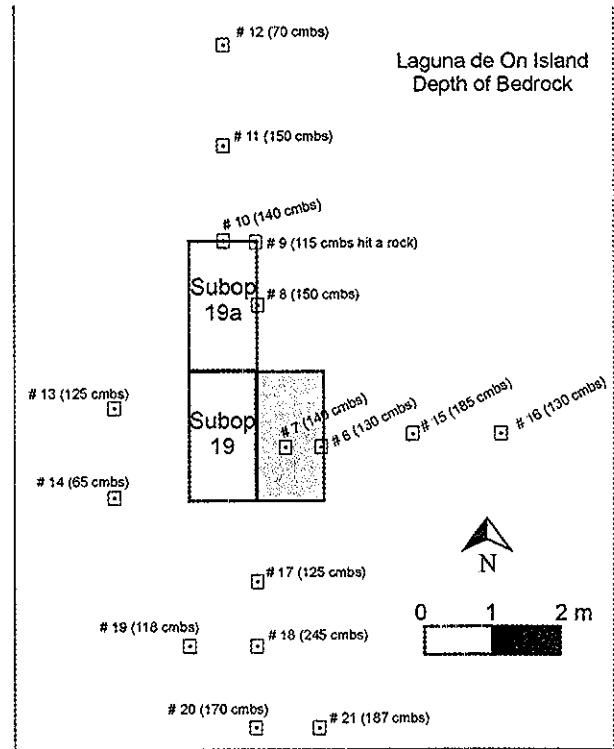


Figure 5 Map of Suboperation 19 and 19a at Laguna de On Island and numbered test auguring location with depth of aceramic levels indicated as centimeters below surface (cmbs).

into bedrock. Suboperation 26b was also dug by arbitrary 10 cm levels and in its north profile we documented an 18 cm deep posthole originating from the aceramic orange horizon and descending into bedrock (Figure 8). The profiles of Suboperation 26b document three levels (A, B and C) that all contain Postclassic ceramics. Level A is a very dark brown (10YR 2/2) loosely packed, humic topsoil. Level B is a densely packed, dark brown (10YR 3/2) clay loam with limestone inclusions and a high ceramic density. Level C is a very dark brown (7.5YR 3/2) soil horizon that resembles Level A without the roots. Level D contains Terminal Classic ceramics and is composed of a medium brown silty clay. Level E is an orange brown (7.5YR 4/6) silty clay containing patinated lithics and no ceramics. Below Level E there is a soft, decomposed limestone bedrock. In addition to the

posthole, the north profile of Suboperation 26b also contained a pit originating from Terminal Classic Level D dug down into bedrock and, along with Suboperation 40f and 27 discussed above, provides a third example of Maya occupants of Caye Coco disturbing earlier preceramic deposits.

The use of arbitrary excavation levels employed in Suboperations 26a and 26b did not allow us to remove each of the levels described above without some mixing. Therefore, between these two units we excavated Suboperation 26c, a 1 x 2 m central unit, from the north profile of Suboperation 26a and the south profile of Suboperation 26b in order to carefully remove soil according to cultural levels. In this manner, each soil level was stripped off from the sides using profiles as a guideline and we were able to confirm that the orange horizon was aceramic. Figure 9 is a photo of Suboperation 26a, b and c at the top of the Late Archaic Level E in Suboperation 26c immediately prior to removal of this orange horizon.

Fred Smith

In 2001, excavations were also initiated at the newly discovered Fred Smith site on the west shore of Progreso Lagoon (Figure 10). This site faces Caye Coco and is approximately 500 m north of Betz Landing (see Figure 2). An area of approximately 800 sq m had been stripped of topsoil by heavy machinery in preparation for house construction. In 2001, excavations were also initiated at the newly discovered Fred Smith site on the west shore of Progreso Lagoon (Figure 10).

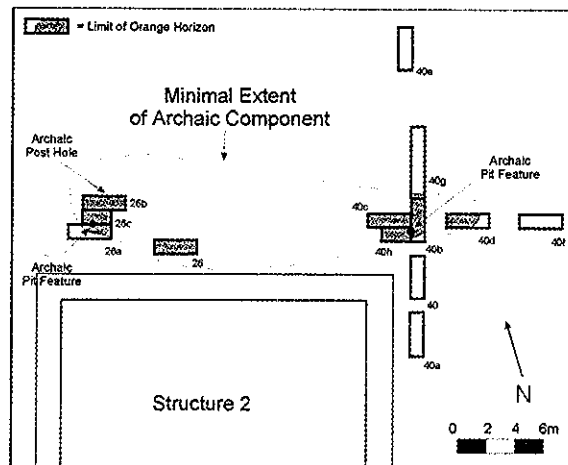


Figure 6. Map of Suboperation 40 and 26 complexes at Caye Coco indicating the extent of the documented Archaic component.

This site faces Caye Coco and is approximately 500 m north of Betz Landing (see Figure 2). An area of approximately 800 sq m had been stripped of topsoil by heavy machinery in preparation for house construction. The bulldozing occurred just prior to our visit to the site and exposed orange soils identical to those documented at Caye Coco, and described from Betz Landing, as well as a scatter of patinated lithics. Systematic surface collections at the Fred Smith site over the next month recovered 358 patinated lithics, including ten unifacial tools, two expedient bifaces and two formal bifaces. Only eighteen unslipped ceramic body shards were recovered from this entire area. Excavations documented an orange, aceramic soil horizon replete with patinated lithics (Figure 11). Unlike Caye Coco, the preceramic orange soil of this site began virtually at ground level and there appears to have been no subsequent occupation. There was a clear association at the site of the orange soil and patinated lithics and so we trenched the shallow deposit to bedrock in order to determine their extent both in the disturbed area and in the intact area adjacent to the bulldozed lot. In all, orange soil containing patinated lithics extended over an area of at least 400 sq m.

(see Figure 11). There were no lithics on the surface of the undisturbed area and without the current land disturbance, we would not have been aware of this site's existence.

Transition from Late Archaic to Middle Formative

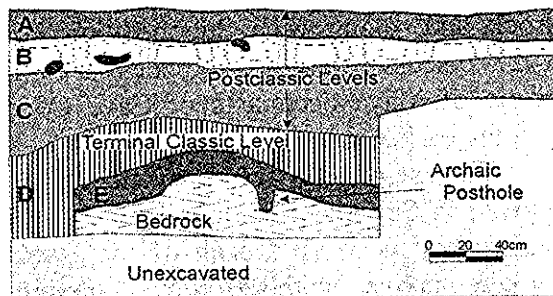
The Archaic lacustrine settlement choice, that parallels Postclassic settlements, appears to have been abandoned during the Formative and Classic periods at the sites of Laguna de On and Caye Coco. This raises the fundamental question of what constituted the new Formative adaptation. Was the Archaic economy really that different than the Formative adaptation? If not, then why were sites with substantial Archaic deposits like Laguna de On Island and Caye Coco not occupied in the Formative and Classic periods? Although I do not attempt to answer these questions here, what we need is a site occupied during both Archaic and Formative periods. Such a site may have been discovered at San Estevan.



Figure 7. Excavations in 2000, Suboperation 40b in foreground with Archaic pit next to upright meter stick. Subop 40 and 40a in background contained no orange soil horizon

Caye Coco - Subop 26b

North Profile



South Profile

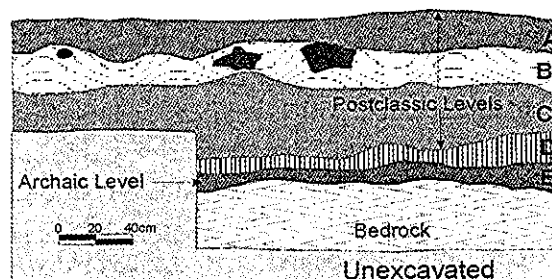


Figure 8. North and south profile drawing of Suboperation 26b with stratigraphy described in text labeled

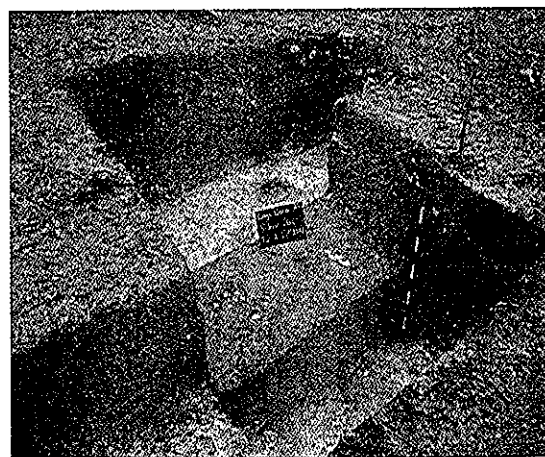


Figure 9. Photo of Suboperation 26a, 26b and 26c before excavation the Archaic orange soil horizon in Suboperation 26c in 2001.

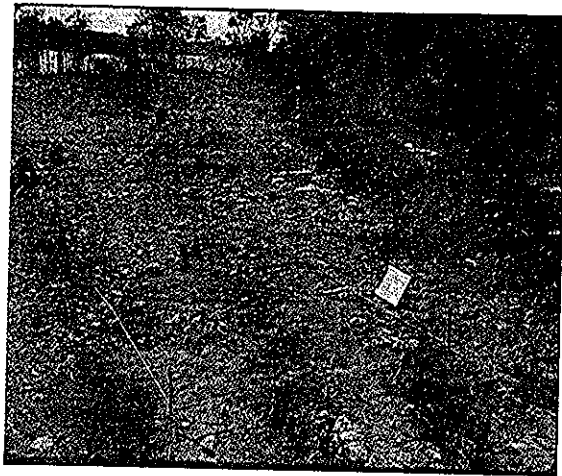


Figure 10. Photo of surface of the bulldozed section of the Fred Smith site in 2001. Suboperation 1 prior to excavation in foreground (see Figure 11) and Caye Coco across the water in background.

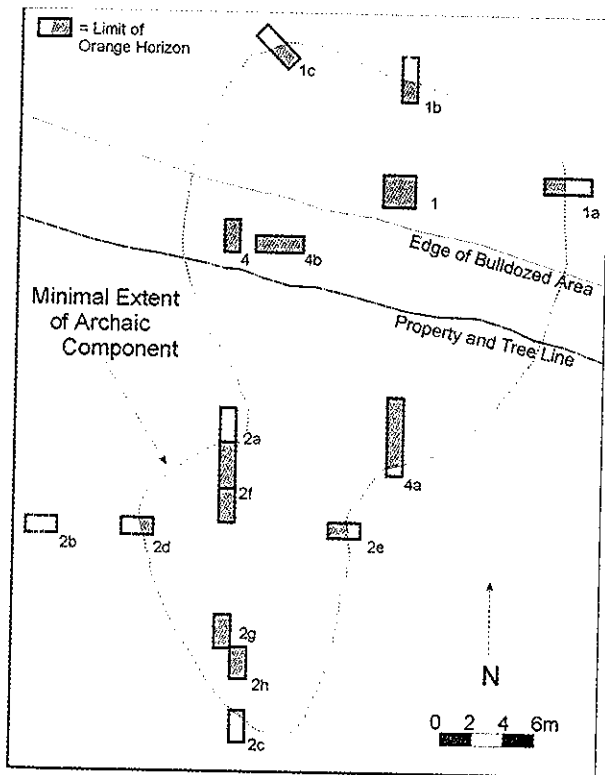


Figure 11. Map of the Fred Smith site with the extents of the Archaic orange soil horizon indicated

San Estevan

The excavations reported here represent the result of work at the base of the

large central mound at the site core of the San Estevan site. This mound is located approximately 1 km from the New River, 1 km from the modern town of the same name (Figure 1). Excavations at this site were previously carried out by Laura Levi (2002), who documented primarily Late Formative and Classic period occupation

Due to modern land disturbance, several hectares of what was previously the site core was excavated by heavy machinery down two meters below bedrock. The site's ballcourt and several elite mound groups were quarried and carted away as road fill and backhoes continued to excavate until the marl bedrock became too hard to remove. In 2000, the village of San Estevan established their dump in the crater left by the quarrying activities. In 2001 the author, along with Marilyn Masson and twenty field school students, visited the site and noticed a distinctive orange soil horizon in a 30 m section of the profiles created by the quarrying activities. This orange horizon intrigued us as it resembled those containing Archaic materials at numerous sites around Progreso Lagoon (Rosenswig and Masson 2001).



Figure 12. Photo of San Estevan dump with the 9 m profile documented in 2002.

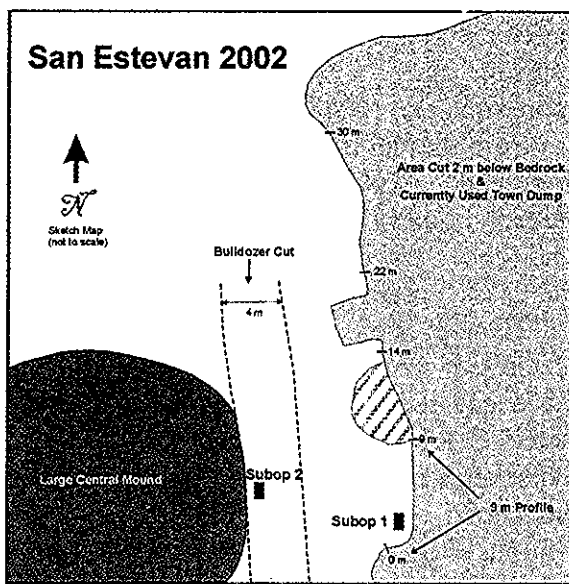


Figure 13. San Estevan with the locations of excavation units and 9 m profile.

In July 2002, I returned to the site and scrapped down the 30 m section of profile that contained the orange soil horizon (Figure 12 and 13). With the resulting increased visibility of the stratigraphy, a 9 m section was selected to be profiled. This section was directly east of San Estevan's large central mound, it also contained the most complex stratigraphy and the thickest section of the orange soil horizon. One meter west of the profile a 1 x 2 m unit was excavated as Suboperation 1 to provide a sample of materials from each stratigraphic level (Figure 14). A second 1 x 2 m unit was excavated as Suboperation 2 in a bulldozer cut right at the eastern base of the large central mound (see Figure 13).

Figure 15 represents the profile of the east wall of Suboperation 1. Level 1 was 40 cm thick and began as a dark humic layer of soil that had built up since the area was bulldozed and faded into a tan fill. Level 2 was 20 cm thick and was arbitrarily divided from Level 1 to bring the unit to within 10 cm of a plaster floor. Levels 1 and 2 contain modern garbage and so we screened every other bucket to recover a 50% sample of the

ceramics from the fill. These ceramics included Late Formative red and orange waxy wares as well as 2 shards with polychrome painting.

Level 3 was indistinguishable from the level above in terms of soil color and also contained Late Formative ceramics, but no modern garbage. The level was 10-12 cm thick and terminates on a hard marl floor. This was the first intact, undisturbed level and we screened 100% of the matrix from here down. In addition, a 1 liter soil sample was collected for flotation. Level 4 corresponds to the plaster floor as well as approximately 10 cm of subfloor materials. The plaster floor angles at a different direction from what was documented in the 9 m profile, and so, this appears to represent ancient disturbance. Flotations sample were collected both from the plaster floor itself and

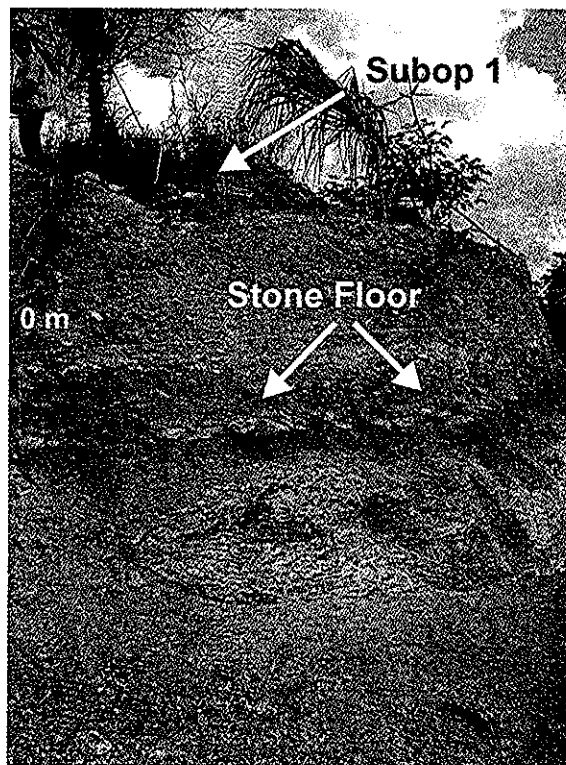


Figure 14. Photograph of San Estevan profiled cut, indicating the Middle Formative stone floor and the location of Suboperation 1.

from the subfloor matrix. Level 5 (Stratum C) was separated once the matrix became a darker brown. The bottom of this level was defined by a layer of medium sized cobbles with a layer of burnt limestone chunks laying on, and directly above, them. These stone cobbles were defined in the 9 m profile (Figure 14) and documented in the south third of this Suboperation. Large cobble stone surfaces were documented at Cuello associated with Swazey phase structures (Hammond et al. 1991: 30-32; Cartwright and Hammond 1991: 99) and at Cahal Pech with Kanluk (aka Jenny Creek) phase deposits (Cheetham 1996: 5-19). The layer of small, burnt limestone chunks continued across the north two-thirds of the Suboperation (where there were cobbles) and defined the bottom of Level 5. Therefore, Level 5 was a distinct, dark stratigraphic layer between the marl subfloor above and the stone floor below and contained Middle Formative ceramics. A flotation sample was collected from this matrix and from each subsequent lot.

Further excavations were reduced to the northern two-thirds of the unit so as not to disturb the medium sized cobbles that forms a floor. Level 6 was 3 to 5 cm thick and consisted of burnt limestone chunks and surrounding matrix in the north two-thirds of the unit. The first 5 cm of dark matrix below the cobble floor was removed as Level 7. The following 5 cm of the same dark matrix was removed as Level 8 and these two levels contain Middle Formative ceramics and correspond to Stratum D in the 9 m profile.

Level 9 was between 7 and 11 cm thick corresponds to the orange horizon as defined in the 9 m profile (Stratum E) but was hard to define as we came down on it. The matrix was a very dark grayish brown (10YR 3/2) with orange and gray inclusions. Level 10 consisted of a light orange soil with limestone eroding from the bedrock below. The designation yellowish red (5YR 5/8) is the closest color to this level contained in a

standard Munsel color book but the actual color is more orange. Levels 9 and 10 contained no artifacts.

The final lot excavated as Level 11 (Lot 17) consisted of a pit that we first detected in Level 10 and extends under the cobble surface in the south of the unit (see Figure 5). This pit was 40 cm in diameter at the top and 30 cm deep. Lot 17 consisted of the north half of the pit. The pit was cross-sectioned and the north half of the matrix was excavated. Sixteen lithic flakes and four ceramic body shards were recovered from the pit that originated in the Middle Formative levels above. A 1-liter flotation sample, as well as a number of pieces of carbon, were collected from the matrix within this pit.

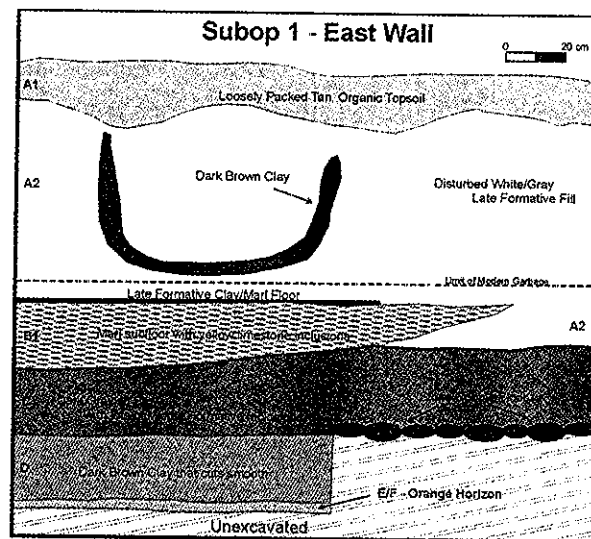


Figure 15. Profile map of Suboperation 1, east profile.

Conclusion

The mid-Holocene transition from foraging to a more sedentary horticultural adaptation approximately 4 to 5 thousand years ago is poorly understood in Mesoamerica, especially in the tropical lowlands. Perhaps the lack of archaeological material from this period is the result of Mesoamerican archaeologists' preoccupation

with the pyramids and pretty ceramics that overlie such deposits. Recent paleoenvironmental reconstruction has outstripped archaeological evidence. The data presented in this paper shed some light on this crucial transition by providing excavation data from the sites of Laguna de On Island, Caye Coco, Fred Smith and San Estevan. Ongoing work at these, and other, sites will hopefully contribute to an understanding of the conditions under which settled life and ceramic use developed and why this transition took so long to occur in the Maya lowlands relative to the rest of Mesoamerica.

Acknowledgements. The work reported in this paper were carried out under a series of permits graciously granted to Marilyn Masson by the Belize Institute of Archaeology for the Belize Postclassic Project. Funding for the project was provided by the National Science Foundation, SUNY Albany and Earthwatch. Additional support for the Archaic Project excavations were provided by the Albers Fund, Department of Anthropology, Yale University. Thanks are extended to David Cheetham for comments on an earlier version of this paper.

References Cited

- Barrett, Jason W.
2000 Excavations at Structure 5: Postclassic Elite Architecture at Caye Coco. In *Belize Postclassic Project 1999: Continuing Investigations at Progreso Lagoon and Laguna Seca*, edited by R. M. Rosenswig and M. A. Masson, pp 31-58. Institute of Mesoamerican Studies Occasional Publication No. 5. The University of Albany - SUNY
- Byers, D. (editor)
1967 *The Prehistory of the Tehuacan Valley, Vol. 1: Environment and Subsistence*. University of Texas Press, Austin.
- Cartwright Gerhardt, Juliette and Norman Hammond
1991 The Community of Cuello: The Ceremonial Core. In *Cuello: An Early Maya Community in Belize*, edited by N. Hammond, pp. 98-117. Cambridge University Press, Cambridge
- Cheetham, David I.
1996 Reconstruction of the Formative Period Site Core of Cahal Pech, Belize. In *Belize Valley Preclassic Maya Project: Report on the 1995 Field Season*, edited by P. F. Healy and J. J. Awe, pp. 5-33. Trent University Occasional Papers in Anthropology 12, Peterborough, ON
- Clark, John E. and David I. Cheetham
2002 Mesoamerica's Tribal Foundations, ms in possession of author
- Flannery, Kent V. (editor)
1986 *Guila Naquitz: Archaic Foraging and Early Agriculture in Oaxaca, Mexico*. Academic Press, New York.
- Gibson, Eric C.
1991 A Preliminary Functional and Contextual Study of Constricted Adzes from Northern Belize. In *Maya Stone Tools: Selected Papers from the Second Maya Lithic Conference*, Edited by T. R. Hester and H. J. Shafer, pp 229-237. Prehistory Press, Madison.
- Hammond, Norman, Juliette Cartwright Gerhardt and Sara Donaghey
1991 Stratigraphy and Chronology in the Reconstruction of Preclassic Developments at Cuello. In *Cuello: An Early Maya Community in Belize*, edited by N. Hammond, pp 23-55. Cambridge University Press, Cambridge
- Hester, Thomas R., Harry B. Iceland, Dale B. Hudler and Harry J. Shafer
1996 The Colha Preceramic Project: Preliminary Results from the 1993-1995 Field Seasons. *Mexicon* 18: 45-50.
- Iceland, Harry B.
1997 The Preceramic Origins of the Maya: Results of the Colha Preceramic Project in Northern Belize. Unpublished Ph. D. dissertation, Department of Anthropology, University of Texas, Austin.
- Iceland, Harry B. and Thomas R. Hester
1996 The Earliest Maya? Origins of Sedentism and Agriculture in the Maya Lowlands. In *The Prehistory of the Americas*, pp. 11-17, XIII International Congress of the Prehistoric and Protohistoric Sciences Vol 17, Forli, Italy.

- Jacob, John S.
1995 Ancient Maya Wetland Agricultural Fields in Cobweb Swamp, Belize: Construction, Chronology and Function. *Journal of Field Archaeology* 22: 175-190.
- Jones, John G.
1994 Pollen Evidence for Early Settlement and Agriculture in Northern Belize. *Palynology* 18: 205-211.
- Kelly, Thomas C.
1993 Preceramic Projectile-Point Typology in Belize. *Ancient Mesoamerica* 4: 205-227.
- Levi, Laura J.
2002 An Institutional Perspective on Prehispanic Maya Residential Variation: Settlement and Community at San Estevan, Belize. *Journal of Anthropological Archaeology* 21: 120-141.
- MacNeish, Richard S.
1981 Second Annual Report of the Belize Archaic Archaeological Reconnaissance. Phillips Academy, Andover, MA.

1982 *Third Annual Report of the Belize Archaic Archaeological Reconnaissance*. Phillips Academy, Andover, MA.
- MacNeish, Richard S., Antoinette Nelken-Terner and I. Weitlaner de Johnson
1967 *The Prehistory of the Tehuacan Valley Vol 2: The Non-ceramic Artifacts*. University of Texas Press, Austin.
- Mazeau, Daniel E.
2000 Excavations at Structure 2 and Structure 3, Caye Coco In *Belize Postclassic Project 1999 Continuing Investigations at Progresso Lagoon and Laguna Seca*, edited by R. M. Rosenswig and M. A. Masson, pp. 7-20. Institute of Mesoamerican Studies Occasional Publication No. 5. The University of Albany - SUNY.
- Micheals, George H. and Barbara Voorhies
1999 Late Archaic Period Coastal Collectors in Southern Mesoamerica: The Chantuto People Revisited. In *The Evolution of Archaic and Formative Cultures along the Pacific Coast of Latin America*, edited by T. M. Blake. University of Washington Press, Pullman.
- Piperno, D. R. and D. M. Persall
1998 *The Origins of Agriculture in the Lowland Neotropics*. Academic Press, San Diego.
- Pohl, Mary D., Kevin O. Pope, John G. Jones, John S. Jacob, D. R. Piperno, S. D. deFrance, David L. Lentz, J. A. Gifford, Mary E. Danforth, and J. K. Josserand
1996 Early Agriculture in the Maya Lowlands. *Latin American Antiquity* 7: 355-372.
- Rosenswig, Robert M.
2001 Preceramic Evidence from Northern Belize and Caye Coco. In *Belize Postclassic Project 2000: Investigations at Caye Coco and the Shore Settlements of Progresso Lagoon*, edited by R. M. Rosenswig and M. A. Masson, pp. 87-95. Institute of Mesoamerican Studies Occasional Publication No. 6. The University of Albany - SUNY.

2002 Excavation of Preceramic Components at Caye Coco and the Fred Smith Site. In *The Belize Postclassic Project 2001: Investigations and Analysis at Progresso Lagoon*, edited by R. M. Rosenswig and M. A. Masson. Institute of Mesoamerican Studies Occasional Publication No. 7. The University of Albany - SUNY, forthcoming.
- Rosenswig, Robert M. and Marilyn A. Masson
2001 Seven New Preceramic Sites Documented in Northern Belize. *Mexicon* 23: 138-140.
- Rosenswig, Robert M. and Thomas W. Stafford, Jr.
1998 Archaic Component Beneath a Postclassic Terrace at Suboperationation 19, Laguna de On Island. In *Belize Postclassic Project 1997: Laguna de On, Progresso Lagoon, Laguna Seca*, edited by M. A. Masson and R. M. Rosenswig, pp. 81-89. Institute of Mesoamerican Studies Occasional Publication No. 2. University of Albany - SUNY.
- Voorhies, Barbara
1976 The Chantuto People: An Archaic Period Society of the Chiapas Littoral, Mexico. *Papers of the New World Archaeological Foundation* 41. Provo, Utah.
- Zeitlin, Robert N.
1984 A Summary Report on Three Seasons of Field Investigations into the Archaic Period Prehistory of Lowland Belize. *American Anthropologist* 86: 358-368.