

REPORT

Shell Games: A Middle Preclassic Shell Deposit at the Minor Center of Tutu Uitz Na in the Upper Belize River Valley

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Abstract

Recent excavations at the ancient Maya minor center of Tutu Uitz Na in the Belize River Valley revealed an especially large—about 20 million shells—Middle Preclassic (900–300 BC) shell deposit underlying the plaza. Although marine shell species make up a small percentage of the assemblage, most shells are *Pachychilus* spp., a common freshwater snail known in the southern Maya Lowlands as *jute*. This report describes the architectural context and assemblage of the deposit and compares it to similar examples in the region. We propose that the Tutu Uitz Na deposit provides one of the earliest examples of depictions of the Maya primordial sea in an architectural context.

Resumen

Excavaciones recientes en el antiguo centro menor Maya de Tutu Uitz Na en el valle del río Belice revelaron un depósito de conchas del Preclásico Medio (900–300 aC) especialmente grande (~20 millones de conchas) que subyace a la plaza. Mientras que las especies de conchas marinas constituyen un pequeño porcentaje del conjunto, la mayoría de las conchas son *Pachychilus* spp., un caracol común de agua dulce conocido en las tierras bajas mayas del sur como *jute*. Este informe describe el contexto arquitectónico y el ensamblaje del depósito, y lo compara con ejemplos similares en la región. Proponemos que el depósito Tutu Uitz Na proporciona uno de los primeros ejemplos de representaciones del mar primordio maya en un contexto arquitectónico.

Keywords: Preclassic Maya; freshwater shell (*jute*) deposits; sacred landscapes; ceremonial sources of power and authority

Palabras clave: Preclásico Maya; depósitos de conchas (*jute*) de agua dulce; paisajes sagrados; fuentes ceremoniales de poder y autoridad

The species of freshwater snail commonly known in the southern Maya Lowlands as *jute* (*Pachychilus* spp.) is a familiar sight in archaeological contexts throughout the Belize River Valley. Sizable deposits of *jute* shells, often intermixed with their marine counterparts and figurines, are a common feature of Middle Preclassic (900–300 BC) contexts, particularly in caches and deposits in caves (Boileau and Stanchly 2020; Healy et al. 1990; Keller 2012:254); their presence reflects purposeful efforts by the Maya to imbue spaces with connections to fertility and characteristics of the watery underworld (e.g., Halperin et al. 2003). One locale also known to be associated with aquatic contexts is the Mesoamerican plaza (Freidel et al. 1993). We draw on new data from the minor center of Tutu Uitz Na in the Upper Belize River Valley of west-central Belize (Figure 1) to propose that the presence

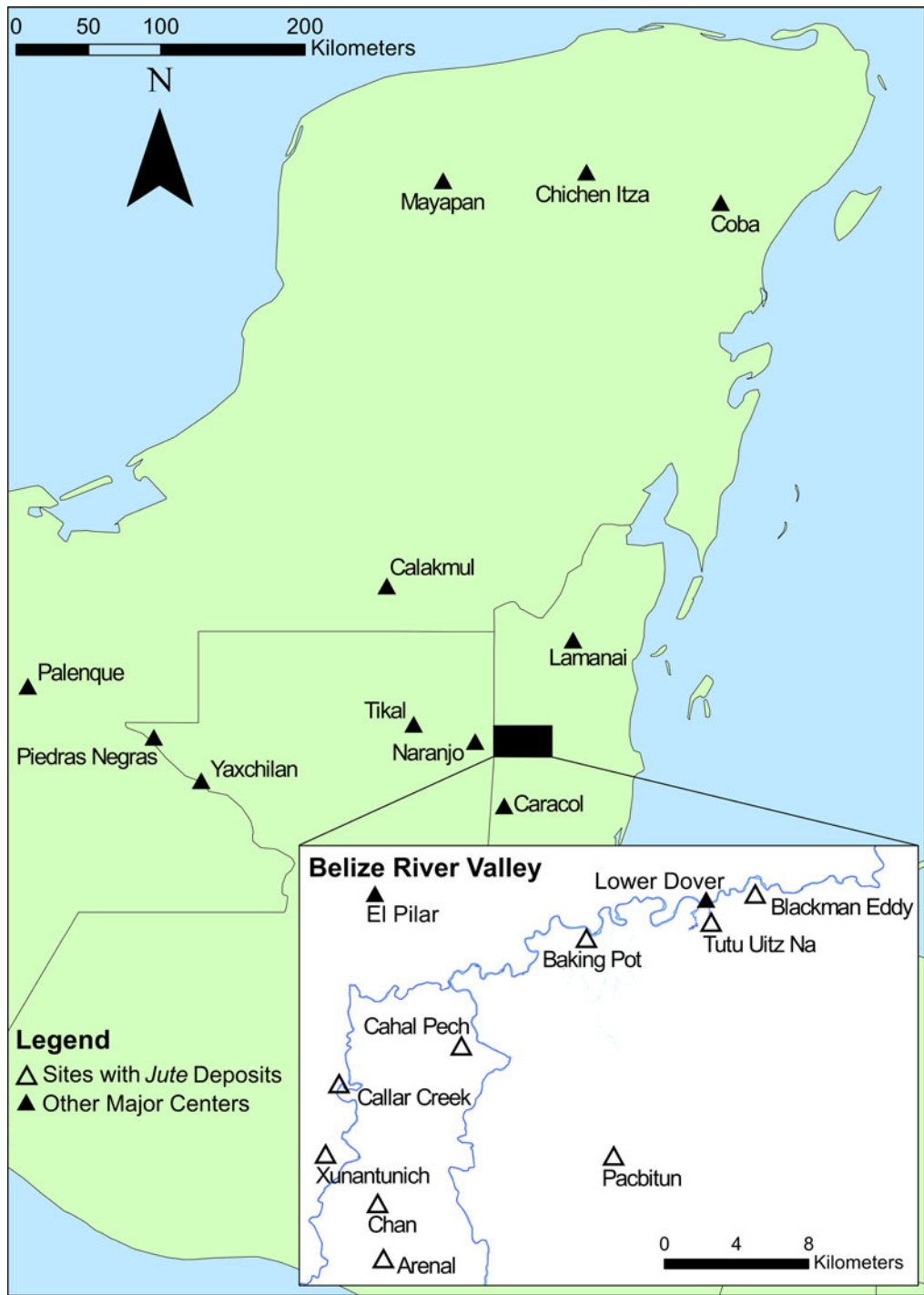


Figure 1. Regional map.

of *jute* and marine shell in plaza deposits reflects Middle Preclassic Maya intentions to imbue these spaces with symbolic properties of the primordial sea.

Maya ceremonial spaces were built to reflect the Maya cosmos, a quadripartite world bordered in the four cardinal directions by sacred mountains and divided vertically into the heavenly upperworld,

the middleworld or living world, and a watery underworld. The *Popol Vuh*, the Maya creation story, describes all of creation as arising from a vast primordial sea, with the middleworld portrayed as resting on the back of a great turtle or crocodile floating in this sea. The sea was a place of both death and of rebirth (Freidel et al. 1993:92). The underworld existed both beneath the ground surface and within bodies of water (Chase and Chase 2009), and aquatic creatures often appear in underworld iconography. Archaeologically documented caches include representations and remains of both freshwater and marine animals and may be physical representations of this underworld. In the Maya worldview all waters are interconnected: rainwater, freshwater, and saltwater all originate in the same primordial sea. This connection means that the attributes and inhabitants particular to one body of water could be shared by all. Water lilies (*Nymphaea apla*), although they are exclusively freshwater plants, occur in multiple representations of the primordial sea (Houston 2010:70). The Maya constructed plaza spaces to represent the surface of this primordial sea, with the surrounding temples acting as *witz*, or sacred mountains (Freidel et al. 1993:139).

The Tutu Uitz Na Jute Deposit

Tutu Uitz Na is a tertiary minor center located on a hilltop 600 m southeast of the Late Classic (AD 600–900) center of Lower Dover. The Belize Valley Archaeological Reconnaissance (BVAR) project placed six excavation units in the plaza at Tutu Uitz Na (Figure 2). Ceramic and radiocarbon dating indicate that the center was occupied from the Middle (765–535 cal BC) through the Terminal Classic period (around 890 cal AD; Walden 2021:335). Late Classic Tutu Uitz Na consisted of four structures situated around a sizable plaza (700 m²). The Middle Preclassic component was smaller, consisting of several low-cut stone platforms around the plaza (about 600 m³ of architecture). Excavation of Structure N1 revealed a 50 cm high Middle Preclassic residential platform that sat above the *jute* deposit, which dated to 540–400 cal BC (reported in Walden 2021:Table 6.11). This earliest structure was twice the size of contemporaneous commoner households and included cut limestone blocks that were similar to architecture at larger nearby contemporaneous centers (Figure 3; see also Walden 2021:329).

A *jute* deposit was documented in all six plaza excavation units. It consisted of a dense, approximately 30 cm layer of *jute* shells, pebbles, and a dark loamy matrix (7.5YR 6/3) placed directly on

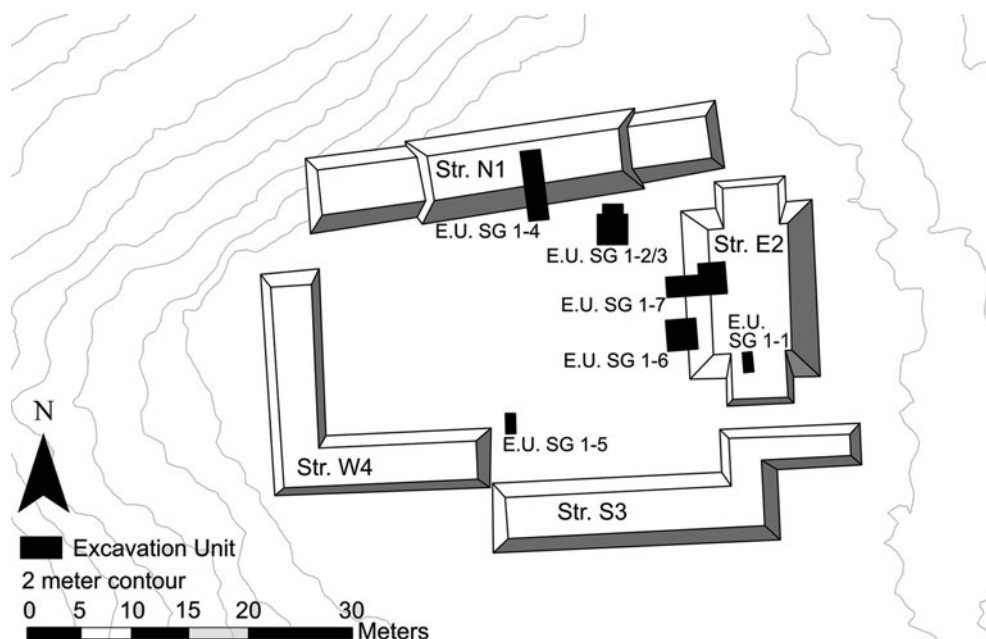


Figure 2. Map of Tutu Uitz Na showing locations of excavations.

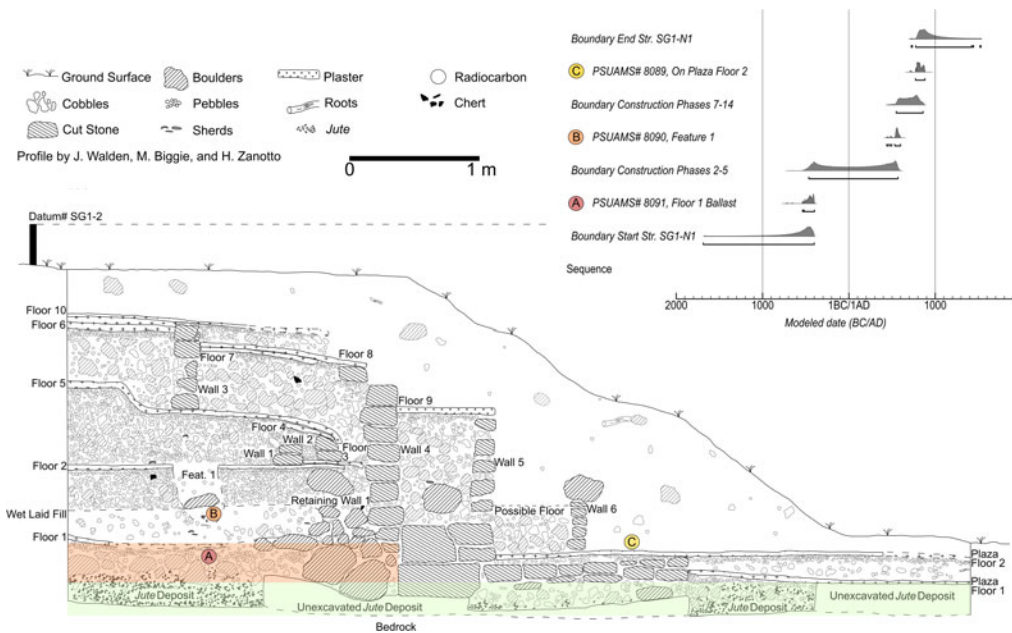


Figure 3. East profile of Structure N1. *Jute* deposit shown in green; Middle Preclassic platform shown in orange. (Color online)

top of bedrock and filling the whole of the unit. The placement of these shells on an area that had been scraped to bedrock potentially indicates a founding event. The diagnostic ceramic assemblage within the deposit is entirely Middle Preclassic ($n = 37$); it includes Jocote Orange Brown and Savana Orange sherds, as well as fragments of Savana Orange paste figurines ($n = 2$; Awe 1992; Gifford 1976).

Although no charcoal was recovered from the deposit itself, samples from surrounding architecture corroborate the ceramic/stratigraphic dating of the deposit. Charcoal from the fill of the second construction phase at Structure N1 provides a reliable terminus ante quem of 540–400 cal BC for the *jute* deposit. Structure E2 is built on a natural spur in the limestone bedrock that rises above the surrounding deposit (Figure 4). A small Middle Preclassic cist cut into this rise contained 20 *jute* and charcoal dating to 765–540 cal BC (reported in Walden 2021:Table 6.12). Although this does not provide a terminus ante quem for the *jute* deposit, the placement of the deposit adjacent to the cist and the inclusion of *jute* within the cist suggest they were roughly coeval.

The six units yielded about 91,000 *jute*, with a median density of 6,735 per m². The distribution of excavation units suggests that the *jute* deposit underlays the entire eastern half of the plaza. Similar densities are evident in the western half of the plaza, where the deposit and its vast numbers of *jute* are visible in the eroded hillside. Extrapolating from the test units, the extensively excavated eastern plaza could contain about 10 million *jute*. If shell densities remain consistent throughout the plaza, the entire deposit would contain more than 20 million *jute*. These *jute* were likely consumed prior to deposition, because 88% show evidence of extraction techniques such as puncturing and “spire-logging” (Figure 5; Keller 2012:258–259; see also Solis 2010:26–27, 92–94; Supplemental Table 1).

In addition to *jute*, the deposit contains freshwater species such as apple snail (*Pomacea flagellata*) and river clam (*Nephronaias* sp.). High proportions of marine shell beads and production debris are also present in the *jute* deposit (Figure 6), including 74 finished shell beads, 32 partially finished shell beads, and 188 pieces of shell debitage (Supplemental Table 1). The larger marine shell beads may represent earlier stages in a production sequence (Keller 2012). Alternatively, larger, rougher beads may represent finished products dating to the Early Middle Preclassic (900–600 BC), whereas the smaller refined ones were Late Middle Preclassic (Boileau and Stanchly 2020:51). Unlike other examples of Preclassic bead production in the region, there is a paucity of chert drills at Tutu Uitz Na (Hohmann et al. 2018), indicating that the shell was removed from its primary production locale (see Keller 2012:266). Although it

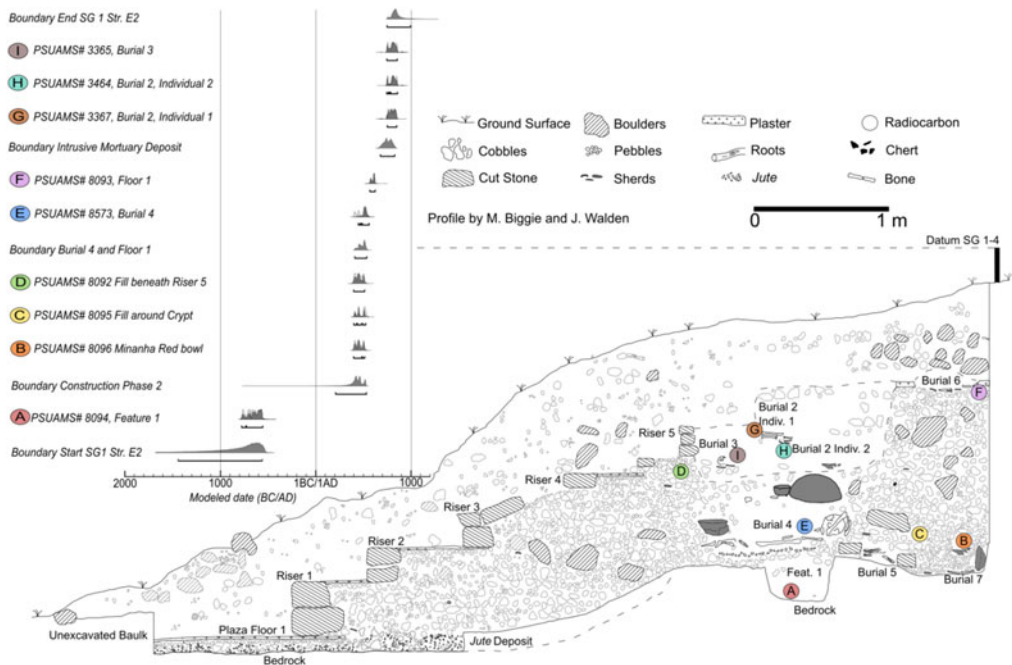


Figure 4. North profile of Structure E2; see sample A.

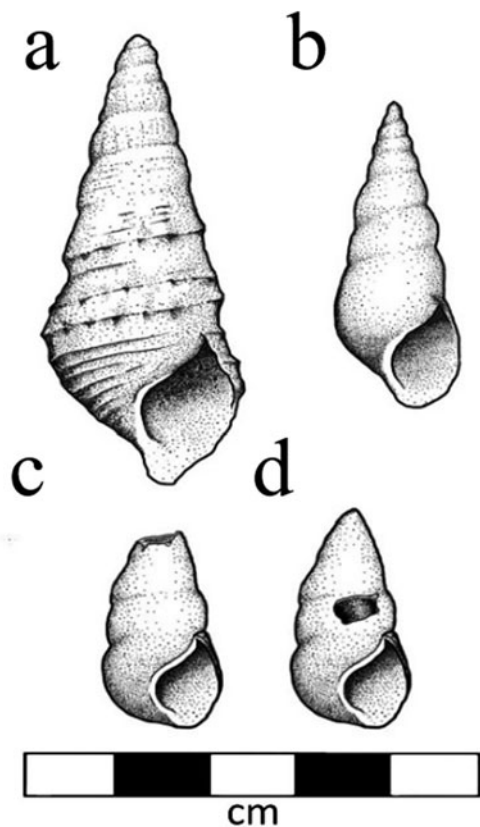


Figure 5: Illustration showing (a) *Pachychilus glaphyrus*, (b) *Pachychilus indiorum*, (c) spire-lopped jute, and (d) punctured jute.

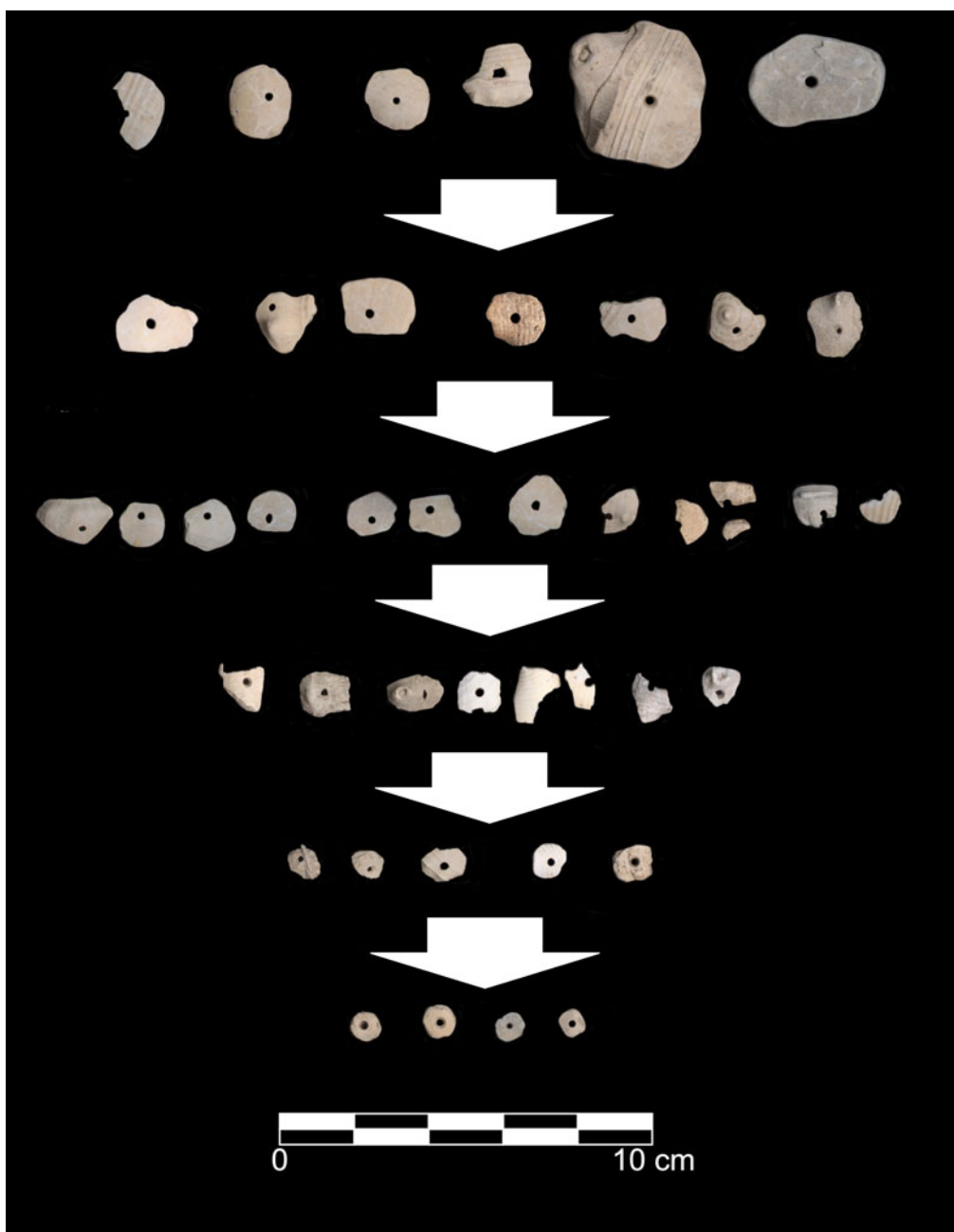


Figure 6. Marine shell beads. The arrows represent either the hypothesized production sequence based on Keller (2012) or diachronic stylistic changes based on Boileau and Stanchly (2020).

is possible that local residents were importing beads and debitage to place in the *jute* deposit, it is more likely that bead manufacture was occurring somewhere near Tutu Uitz Na.

Construction and Cosmology: Preclassic *Jute* Deposits in the Belize River Valley

Middle Preclassic *jute* deposits have been uncovered in the Belize River Valley at early centers, including Blackman Eddy (Brown et al. 1999), Cahal Pech (Ferguson et al. 1996:44), Las Ruinas de Arenal (Horowitz et al. 2020:292), Pacbitun (Boileau and Stanchly 2020), and Xunantunich (Jamison 1993:25). Other examples of deposits at smaller peripheral settlements associated with nascent elite

households (like at Tutu Uitz Na) include Callar Creek (Kurnick 2013:130) and Chan (where Middle Preclassic *jute* had been redeposited in the Late Classic; see Keller 2012:257). Although these examples vary slightly, *jute* deposits with marine shell primarily occur beneath plaza spaces (Brown et al. 1999:43). The Middle Preclassic in the Belize River Valley saw increasingly sedentary populations and the introduction of monumental architecture. Public ceremonial architecture served to imbue spaces with cosmological significance and to tie a formerly disparate people to a common location, thereby engendering a sense of communal identity (Awe 1992). In many centers, elaborate subfloor dedicatory deposits and caches were laid to consecrate plaza space (Reilly 1994). We argue that a similar logic underlies the placement of the *jute* deposit at Tutu Uitz Na.

There are alternate explanations, however, that could explain the presence of this deposit. The *jute* at Tutu Uitz Na could reflect feasting episodes, given that the plaza deposit contained sufficient *jute* for some 800,000 meals (Healy et al. 1990). If this deposit reflected generic feasting remains, however, we would expect high proportions of nonaquatic fauna, high proportions of serving vessels in relation to storage vessels, and an absence of such unconsumed aquatic items as marine shell beads and debitage (see Supplemental Table 2 and Supplemental Figure 1). If the deposit reflected generic architectural fill, we would expect higher densities of cobbles, limestone, and utilitarian trash such as ceramics and chert (see Supplemental Tables 3 and 4). If the *jute* were brought up in leveling fill dredged from nearby rivers, we would expect to see river sediment, fish bones, a lower overall proportion of *jute* (with little to no puncturing or spire-lopping), and a paucity of items such as marine shell, ceramics, and chert. Artifact proportions support neither the feasting remains nor the architectural fill hypotheses. What we see in this deposit is the placement of shells and shell debitage in an area known by the Maya to represent the primordial sea; these aquatic items, although associated with activities such as feasting and craft production, appear to have been removed from their original sites of consumption and production. This removal, along with a relative dearth of other quotidian trash items commonly encountered in architectural fill, suggests that these items were placed in the deposit with specific intent. We hypothesize that the Maya's intent with this deposit was to fashion the plaza at Tutu Uitz Na as a representation of the primordial sea.

The Middle Preclassic *jute* deposit at Tutu Uitz Na was likely constructed to symbolically imbue the hilltop with cosmological power. We propose that the other Middle Preclassic *jute* deposits in the region may likewise reflect attempts to imbue plazas spaces with qualities of the primordial sea. The construction of the plaza and the surrounding structures mirrors Maya cosmology in miniature and legitimizes the rituals and ceremonies occurring within this space. This example represents, we believe, one of the first architectural depictions of the primordial sea in the Maya Lowlands.

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Data Availability Statement. All data summarized herein are freely accessible for download through the University of Pittsburgh Center of Comparative Archaeology, <https://www.comparch.pitt.edu/>.

Competing Interests. The authors declare none.

Supplemental Material. To view supplemental material for this article, please visit <https://doi.org/10.1017/laq.2023.15>.

Supplemental Figure 1. Bullet graph showing the proportions of feasting-related artifacts at multiple minor centers and households across the area at the 80%, 95%, and 99% confidence intervals. *Note.* The first bullet for Middle Preclassic Tutu Uitz Na is lower than most households where feasting events were taking place (e.g., BR-180/168, Jolna, Petna, Late Preclassic to Late Classic Mamna), and this is statistically significant at the 99% confidence interval.

Supplemental Table 1. Counts of Freshwater and Marine Shell Artifacts in the Jute Deposit at Tutu Uitz Na.

Supplemental Table 2. Counts of Feasting-Related Artifacts Associated with the Jute Deposit at Tutu Uitz Na.

Supplemental Table 3. Counts of Overall Artifacts Associated with the Jute Deposit at Tutu Uitz Na.

Supplemental Table 4. Counts of Overall Artifacts per 1 m³ of Architectural Fill from the Jute Deposit at Tutu Uitz Na in Comparison with Other Middle Preclassic Residential Fill Contexts in the Area.

References Cited

- Awe, Jaime J. 1992. Dawn in the Land between the Rivers: Formative Occupation at Cahal Pech, Belize and Its Implications for Preclassic Occupation in the Central Maya Lowlands. PhD dissertation, Institute of Archaeology, University of London, London.
- Boileau, Arianne, and Norbert Stanchly. 2020. Middle Preclassic Faunal Utilisation at Pacbitun, Belize: Evidence for Ritual Practice, Exchange, and Craft Specialisation. In *An Archaeological Reconstruction of Ancient Maya Life at Pacbitun, Belize*, edited by Terry G. Powis, Sheldon Skaggs, and George J. Micheletti, pp. 41–54. BAR International Series 2970. British Archaeological Reports, Oxford.
- Brown, M. Kathryn, James F. Garber, and Christopher J. Hartman. 1999. Middle Preclassic Ritual Behavior in the Maya Lowlands: An Example from Blackman Eddy. In *The Belize Valley Archaeology Project: Results of the 1998 Field Season*, edited by James F. Garber, pp. 41–67. Southwest Texas State University, San Marcos.
- Chase, Diane Z. and Chase, Arlen F. 2009. Changes in Maya Religious Worldview: Liminality and the Archaeological Record. In *Maya Worldviews at Conquest*, edited by Timothy Pugh and Leslie Cecil, pp. 219–238. University Press of Colorado, Boulder.
- Ferguson, Josalyn, Tina Christensen, and Sonja Schwake. 1996. The Eastern Ballcourt, Cahal Pech, Belize: 1995 Excavations. In *Belize Valley Preclassic Maya Project: Report on the 1995 Field Season*, Vol. 12, edited by Paul F. Healy and Jaime J. Awe, pp. 34–58. Trent University, Peterborough, Ontario, Canada.
- Freidel, David, Linda Schele and Joy Parker. 1993. *Maya Cosmos: Three Thousand Years on the Shaman's Path*. William Morrow, New York.
- Gifford, James C. 1976. *Prehistoric Pottery Analysis and the Ceramics of Barton Ramie in the Belize Valley*. Memoirs of the Peabody Museum of Archaeology and Ethnology Vol. 18. Harvard University Press, Cambridge, Massachusetts.
- Halperin, Christina T., Sergio Garza, Keith M. Prufer, and James E. Brady. 2003. Caves and Ancient Maya Ritual Use of *Jute*. *Latin American Antiquity* 14(2): 207–219.
- Healy, Paul F., Kitty Emery, and Lori E. Wright. 1990. Ancient and Modern Maya Exploitation of the *Jute* Snail (*Pachychilus*). *Latin American Antiquity* 1(2):170–183.
- Hohmann, Bobbi, Terry G. Powis, and Paul F. Healy. 2018. Middle Preclassic Maya Shell Ornament Production: Implications for the Development of Complexity at Pacbitun, Belize. In *Pathways to Complexity: A View from the Maya Lowlands*, edited by M. Kathryn Brown and George J. Bey III, pp. 117–146. University Press of Florida, Gainesville.
- Horowitz, Rachel A., M. Kathryn Brown, Jason Yaeger, and Bernadette Cap. 2020. Ritual Lithic Deposits: Preclassic Precursors to Classic Period Traditions in the Upper Belize River Valley, Belize. *Research Reports in Belizean Archaeology* 17:287–295.
- Houston, Stephen D. 2010. Living Waters and Wondrous Beasts. In *Fiery Pool: The Maya and the Mythic Sea*, edited by Daniel Finamore and Stephen D. Houston, pp. 66–79. Yale University Press, New Haven.
- Jamison, Thomas R. 1993. The Excavation of Structures A-1 and A-4. In *Xunantunich Archaeological Project 1992 Field Season*, edited by Richard M. Leventhal, pp. 22–35. University of California, Los Angeles.
- Keller, Angela H. 2012. Creating Community from Shell. In *Chan: An Ancient Farming Community*, edited by Cynthia Robin, pp. 253–270. University Press of Florida, Gainesville.
- Kurnick, Sarah. 2013. Negotiating the Contradictions of Political Authority: An Archaeological Case Study from Callar Creek, Belize. PhD dissertation, Department of Anthropology, University of Pennsylvania, Philadelphia.
- Reilly III, F. Kent. 1994. Enclosed Ritual Spaces and the Watery Underworld in Formative Period Architecture: New Observations on the Function of La Venta Complex A. In *Seventh Palenque Round Table, 1989*, edited by Merle Greene Robertson and Virginia M. Fields, pp. 1–14. Pre-Columbian Art Research Institute, San Francisco.
- Solis, Wendy. 2010. Ancient Maya Exploitation of *Jute* (*Pachychilus* Spp.) at Minanha, West Central Belize. Master's thesis, Department of Anthropology, Trent University, Peterborough, Ontario, Canada.
- Walden, John P. 2021. The Dynamics of Political Eclipse: The Shifting Strategies of Ancient Maya Intermediate Elites at Lower Dover, Belize. PhD dissertation, Department of Anthropology, University of Pittsburgh, Pittsburgh, Pennsylvania.

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