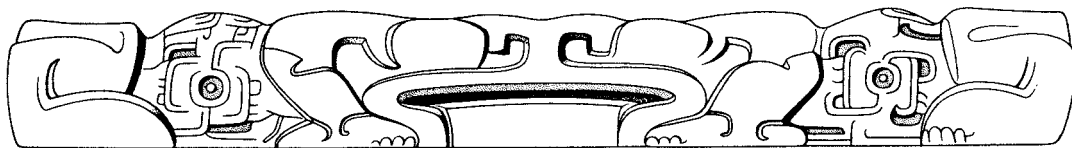


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**SUMMARY:** The present article proposes that the Silvia type vessels of Cholula, the ones that show in a sign off our interlaced scrolls, which are relatively abundant in the archaeological record, could have served to contain offerings. In support of this interpretation, the attributes of these ceramics are described and the iconography of this motif, based on the interpretations of specialists in Mixtec codices such as Alfonso Caso, Ferdinand Anders, Maarten Jansen and Aurora Pérez Jiménez, is analyzed.

**ZUSAMMENFASSUNG:** In diesem Beitrag schlägt die Verfasserin vor, dass die Keramikgefäße vom Typ Sylvia aus Cholula mit einer Bemalung, die vier ineinander verwobene Voluten zeigt und die im archäologischen Befund sehr häufig sind als Gefäße für die Aufbewahrung von Opfergaben gedient haben könnten. Um diese Hypothese zu unterstützen werden die Attribute der Keramik beschrieben und die Ikonographie der verwobenen Bänder wird auf der Grundlage der Deutungen zentralmexikanischer Ikonographie von Spezialisten wie Alfonso Caso, Ferdinand Anders, Maarten Jansen und Aurora Pérez Jiménez untersucht.



## The Cultural Modification of Teeth by the Ancient Maya: A Unique Example from Pusilha, Belize

Geoffrey E. Braswell and Megan R. Pitcavage

Since 2001, the Pusilha Archaeological Project has investigated ancient economy and political history at Pusilha, Toledo District, Belize (Bill and Braswell 2005; Braswell et al. 2004, 2005; Braswell and Gibbs 2006). Located in the southwestern corner of the country, a mere 1.5 km east of the border with Guatemala and within the Q'eqchi' village of San Benito Poite, Pusilha is the largest ancient Maya city of southern Belize (Figure 1). Although we have uncovered archaeological evidence of Postclassic settlement, major occupation of the site was limited to the Late and Terminal Classic periods, especially the eighth and early ninth centuries A.D.

Project members have surveyed approximately 2 km<sup>2</sup> of the settlement, which we estimate to have been between 5 and 6 km<sup>2</sup> in area. During survey, 105 structural groups—containing a total of about 500 mound and terrace features—have been mapped. In 2002, we conducted a test-pitting program designed to recover a representative sample of ceramics and other artifacts from different portions of the ancient city. In 2002, 2004, and 2005, we conducted extensive horizontal excavations in seven structures and tested an eighth platform. Throughout our project, Christian Prager, co-director and project epigrapher, has drawn, cataloged, and analyzed the extensive hieroglyphic corpus of the site (Prager 2002).

In this report, we discuss the burial of a young child who died at Pusilha during the

eighth century A.D. Although the burial itself is quite simple, cultural modifications to the deciduous teeth of the child are unique in Mesoamerica.

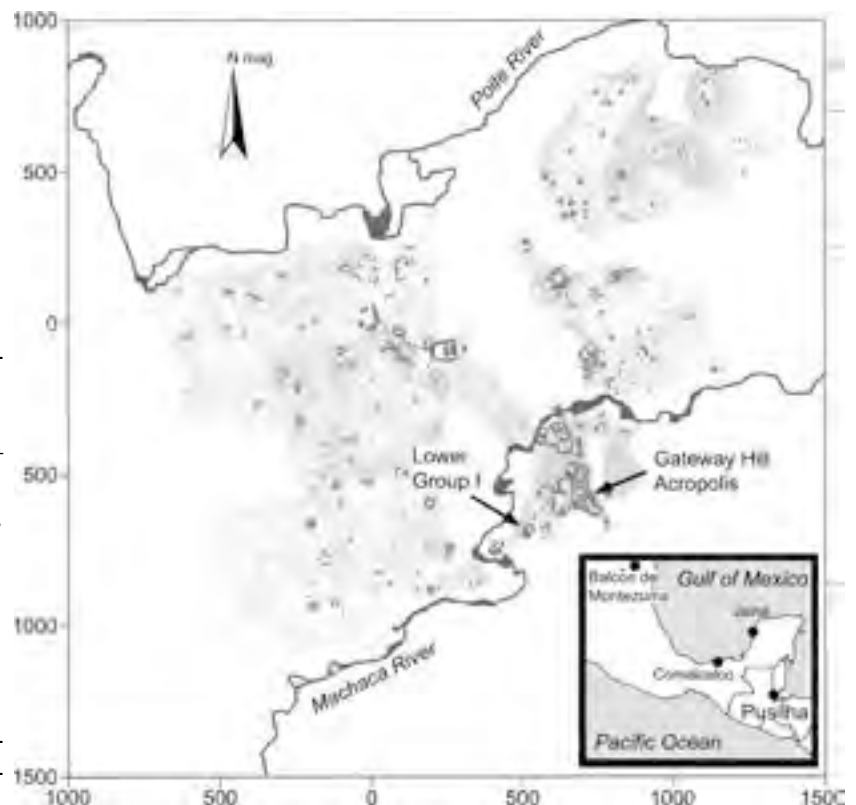


Figure 1. Map of Pusilha, Belize, showing location of Gateway Hill Acropolis and Lower Group I. Scale is in meters from the site datum. Other sites mentioned in the text are shown in the inset.



Figure 2. Location of 14 burials (black dots) excavated at Pusilha during the 2004 and 2005 field seasons. Insets show the south end of the Gateway Hill Acropolis and Lower Group I.

### Pusilha Burial 5/1

Investigations conducted in 2004 and 2005 focused on structures at the southern end of the Gateway Hill Acropolis and in Lower Group I (Figure 2). During excavation of these two groups, a total of 14 burials containing the remains of 19 individuals were found associated with four excavated platforms (Braswell and Gibbs 2006; Braswell et al. 2004, 2005).

Lower Group I is a moderate sized plazuela group located 150 m southwest of the Gateway Hill Acropolis. The quality of the architecture, location of the group near the acropolis, and quality and variety of artifacts found during excavation suggest that the inhabitants of Lower Group I belonged to an elite but non-royal social stratum. With the exception of two potentially Early Classic sherds found within the fill of the western platform (called the Op. 7 Structure), all ceramics recovered from architectural fill, slump, floor, and even surface contexts within Lower Group I date to Tepeu II times. Four ceramic vessels recovered from Burial 6/1 also are assigned to this phase. Excavations throughout the architectural group, therefore, reveal that it was built, occupied, and abandoned between about A.D. 700 and 780, and that its inhabitants were non-royal elites.

The Op. 5 Structure is located on the eastern edge of Lower Group I (Figures 2 and 3). Two burials were found in this platform and were excavated by Braswell, Sonja Schwake, and project co-director Cassandra Bill. Burial 5/2 was encountered eroding out of the surface of the north end of the platform. No burial goods were found. The dentition of this juvenile suggests an age at death of 10 to 11.5 years (Pitcavage 2008). Burial 5/1 was found in a poorly repaired break in the western wall of the Op. 5 Structure, just south of

the stair and the central axis of the platform (Figure 3). Although no ceramics were found within Burial 5/1, we date it to the eighth century because there is no evidence of either earlier or later activity in Lower Group I. Burial 5/1 consists of the fragmentary remains of a child who wore a necklace made of small shell disks (Braswell et al. 2005). Cranial fragments were found at the south end of the burial, which is highly unusual for Pusilha. In most cases, individuals were buried with their heads to the north.

### Cultural Modification of Deciduous Teeth

Osteological investigation of the remains was limited due to the poor preservation of skeletal material. Few elements could be precisely identified, but it appears that the majority of the body is represented. The best preserved features are the teeth. Permanent dentition was found within the mandibular crypts. Fifteen deciduous teeth were found, but most were loose. The only missing deciduous teeth are the upper central incisors, the lower right central incisor, and the lower second molars. Dental development suggests an age at death of between four and five years.

A highly unusual characteristic of this burial is the cultural modification of the deciduous upper lateral incisors. The distal corners of both teeth appear to be filed (Figure 4). Lori Wright (personal communication, 2008) cautions that for deciduous incisors, it is easy to misidentify uneven wear of the mammelons as examples of filing. Nevertheless, the

attrition on these two teeth is symmetrical, strengthening the hypothesis that they are the result of cultural practice.

An absolutely unique aspect of this burial is that these two deciduous teeth were outfitted with inlays. Schwake noted this unique feature in the field during excavation. The right lateral incisor still retains its jadeite inlay, but the left inlay was not recovered (Figure 4). Assuming that the distal filing is intentional rather than uneven wear, the combination of inlays and filing are an example of Type G10 in Javier Romero's (1970) typology of dental modification.

The modification of deciduous dentition was extremely rare in ancient Mesoamerica. In his comprehensive study of

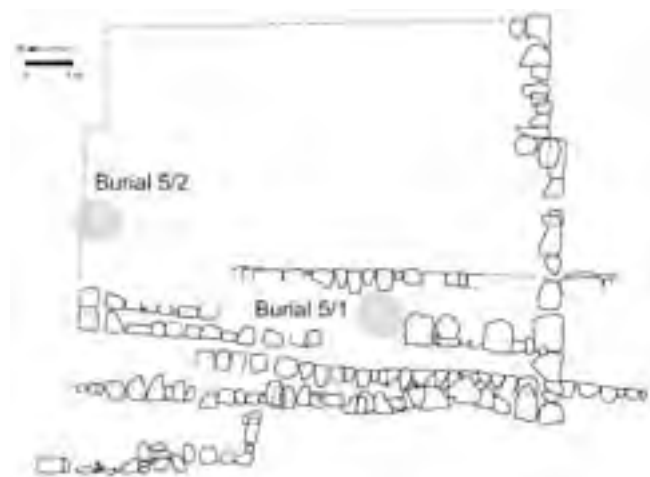


Figure 3. Plan of the Op. 5 Structure showing the locations of Burials 5/1 and 5/2.

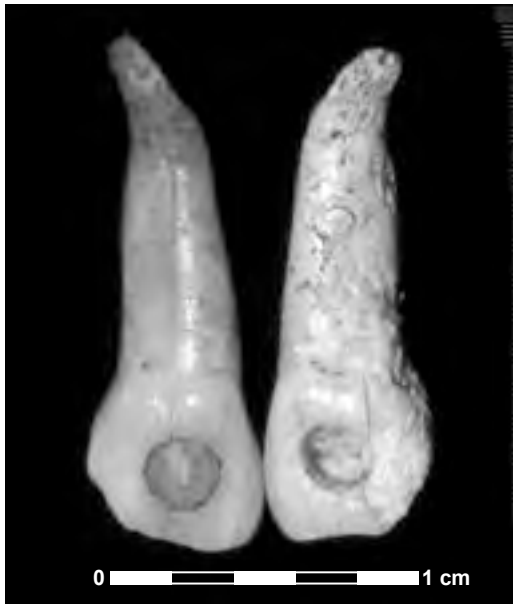


Figure 4. Deciduous upper lateral incisors from Pusilha Burial 5/1. Distal corners are filed and both teeth have been drilled for inlays. The jadeite inlay is still present in the right upper lateral incisor.

dental modification in prehispanic Mexico, Romero (1958:165) notes that he did not identify even one case of this practice on deciduous teeth. From this lack of evidence he infers „esta práctica generalmente tenía lugar cuando el sujeto entraba a la edad adulta o después“ (Romero 1958:166). Romero concludes that the typical age range during which dental modification was practiced was young adulthood (age 21 to 35 years). Only rarely was it practiced on subadults (age 18 to 20 years; Romero 1970:55).

More recently, Vera Tiesler's (2001:35) examination of dental modification in Mesoamerica has revealed instances of deciduous filing at Jaina (Mayer 1983:16, 18) and at Comalcalco. Additionally, Peña Gómez (1992:110) noted filing on the upper central incisors and the lower left central incisor of a child of approximately five years of age at the site of Balcón de Montezuma, Tamaulipas. All three of these sites are located near the Gulf Coast of Mexico (Figure 1). To date, no other unambiguous examples of the filing of deciduous teeth have been recorded for the central or southern Maya lowlands, let alone for Belize. In this regard, Pusilha Burial 5/1 is unique.

Most importantly, the individual interred in Burial 5/1 at Pusilha contains the only occurrence of inlays in deciduous teeth known in Mesoamerica. According to López Olivares (1997:114), it is nearly impossible to inlay deciduous teeth because of the extent of their pulp cavities. Additionally, deciduous tooth enamel is extremely thin and cannot easily withstand the drilling process.

It is important to note that we cannot determine when the two upper lateral incisors of the individual in Pusilha Burial 5/1 were modified. One possibility is that the teeth were filed and inlayed during the short life of the child. Nonetheless, given the anatomical constraints of deciduous teeth noted by López Olivares, we consider it to be somewhat unlikely that the inlays were made before death.

A second possibility is that the teeth were modified in preparation for the sacrifice of the child. In this case, there would be no need to worry about potential damage to the delicate deciduous teeth. There are no osteological signs of

trauma consistent with a violent death, but again we caution that remains are very fragmentary. The burial was cut into a previously existing structure, which does not suggest a dedicatory event. For this reason, we do not consider it likely that the child was sacrificed and buried as an offering. Instead, the context of the burial suggests that the child died and was interred beneath the floor of a pre-existing habitation structure.

It is important to stress that the modified teeth were not found embedded in the maxillae. It is therefore conceivable that these two deciduous teeth had already fallen out and were modified either before or after the death of the child and were interred as grave offerings. Nevertheless, the age at death estimate suggests to us that this is highly unlikely. Moreover, the modified teeth were found in close association with the cranial remains. Most striking, the teeth have full and complete roots (Figure 4). In contrast, the roots of deciduous teeth are resorbed as permanent teeth begin to erupt. For these reasons, we do not consider it at all plausible that the two incisors were modified after falling out.

The fourth and most likely possibility is that the two teeth were inlayed after death but before burial. The combined pattern of distal filing might be viewed as forming a large T or shark's tooth from the upper incisors. Individuals depicted in Maya art with a shark's tooth for a single upper incisor are often associated with sacrifice. Thus, one interpretation is that the death of the child was somehow viewed as a great loss or perhaps even as a sacrifice, and that the two upper incisors were modified after death to reflect this belief.

## Conclusion

The cultural practice of modifying permanent teeth is well documented in Mesoamerica. In the Maya area, jadeite, pyrite, and other minerals were often used for inlays in permanent teeth. Dental filing was even more common. Although at least two examples of filed deciduous teeth have been noted in the Maya region, Pusilha Burial 5/1 is the only known unambiguous case from the southern or central Maya lowlands. Moreover, the jadeite inlays on the upper lateral incisors of this child are the only known example of inlays on deciduous teeth in Mesoamerica. Although we have no definitive evidence, the delicate morphology of deciduous teeth suggests that modification may have occurred after death.

It is important to stress that there is no reason to think that this is a burial of a member of the Pusilha royal family. The presence of jadeite inlays on the child, therefore, should not be interpreted as the unique treatment of a potential royal heir. Instead, we hypothesize that this treatment—most likely postmortem—was meant either as a sign of respect to living, adult members of the family, or was intended as a deliberate expenditure to commemorate the death of a valued and loved child.

## Acknowledgments

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RESUMEN: Descubrimos el entierro simple de un niño durante excavaciones en la ciudad maya de Pusilhá, Distrito de Toledo, Belice. El entierro fecha al siglo VIII d.C. y contuvo los restos mal preservados de un niño que murió a la edad de cuatro o cinco años. Dos dientes infantiles (los incisivos laterales superiores) del niño fueron filados y tuvieron incrustaciones de jadeíta. Hay solamente tres casos publicados y no equivocados de la filación de dientes infantiles en mesoamérica. La presencia de incrustaciones de jade en dientes infantiles es absolutamente única. Dientes infantiles tienen cavidades grandes de pulpa y esmalte delgado. Por eso, especulamos que la modificación dental ocurrió después de la muerte del niño.

ZUSAMMENFASSUNG: Während des archäologischen Projektes in Pusilha, Toledo District, Belize, wurde eine einfache Kinderbestattung gefunden, die in das 8. Jh. n. Chr. datiert und die schlecht erhaltenen Überreste eines vier bis fünf Jahre alten Kindes enthielt. Die oberen seitlichen Milchschneidezähne des Kindes sind angeschliffen und weisen Inkrustationen aus Jadeit auf. Es gibt nur drei weitere publizierte eindeutige Beispiele für das Schleifen von Milchzähnen in Mesoamerika. Die Präsenz von Jade-Inkrustationen in Milchzähnen ist absolut einzigartig. Weil die Zahnhöhlen der Milchzähne sehr ausgeprägt und der Zahnschmelz sehr dünn sind nehmen wir an, dass die Modifikation der Zähne nach dem Tod des Kindes stattfand.

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