

A Little Bite of Prehistory

by

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This article provides details on bite impressions preserved on a prehistoric pottery sherd excavated from the Cresaptown site (18Ag119). The impressions were revealed during the process of routine ceramic analysis. The rim sherd is typical of the uncollared Page limestone-tempered ceramics that dominate the Cresaptown site assemblage (Wall 2001). The sherd has a vertically cordmarked exterior and plain interior. Cordage impressions exhibit a final z-twist direction, also typical of upper Potomac River Valley Page ceramics. Cordmarking is oriented vertically and begins just below the folded over lip as shown in Figure 1. Although this sherd was not recovered from dated contexts, radiocarbon dates obtained from nearby features range from AD 1000 - 1300.



Figure 1: Uncollared Page limestone-tempered pottery recovered from 18Ag119. Two tooth impressions are visible on the top right portion of the sherd.

Description of Tooth Impressions

This rim sherd has a maximum vertical measurement of 29 mm and a maximum horizontal measurement of 39 mm. The rim is 6 mm in width. On the exterior vessel surface, approximately 3 mm inferior to the rim, are two distinct maxillary central incisor impressions (Figure 2). These impressions are relatively shallow; not exceeding 1 mm in depth. The entire occlusal surface of the left incisor (I^1) impression is represented. This tooth measures 5.5 mm medial-laterally. The right incisor impression (I^2) lacks the lateral aspect of the tooth surface and measures 5 mm medial-laterally. A defect on the on the body of the vessel that extends onto the rim may represent the remnants of the left lateral incisor (I^2) impression.



Figure 2: Exterior vessel surface showing maxillary central incisor impressions.

On the interior vessel surface, opposite of the maxillary teeth impressions, are four distinct mandibular incisor impressions (Figure 3). The two central incisor (I_1 and I_2) impressions are located approximately 5 mm inferior to the rim and have maximum depths not exceeding 1 mm. The entire occlusal surfaces of these teeth are represented, with the left I_1 impression measuring 3.13 mm and the right I_1 impression measuring 3.15 mm, medially-laterally. The right mandibular second incisor (I_2) impression has diffuse boundaries and is the deepest of all the tooth impressions on this vessel with the medial aspect measuring 1.01 mm in depth. To the right of this impression is a slight defect in the pottery surface that may represent the right canine. The left I_2 is represented only by a small (1.34 mm) impression made by the medial aspect of the tooth.

The shape, size, and the overall morphology of the impressions on this pottery sherd are consistent with the anterior human dentition. The impressions on the exterior vessel surface clearly represent the maxillary central incisors and possibly the left lateral incisor. The impressions on the interior vessel surface match the corresponding mandibular central and lateral incisors, and possibly the right canine. The medial lateral dimensions of these impressions are small, and were obviously made by deciduous dentition, or what are commonly referred to as baby teeth.

While dental calcification provides more reliable estimates of age, the eruption of the incisors generally places the age of this child at about one year. If the shallow impressions were in fact made by the canines, as they probably were, then we can increase the minimum age of this individual by a few months. The absence of impressions left by adult dentition indicates that the age of this individual did not exceed 6 years.

Based upon the bite plane, the vessel would have been rotated approximately 30 degrees to the right, or the individual's head would have been rotated approximately 30 degrees to the left when the impressions were made. Of particular interest is the obvious shovelling of the maxillary incisors. Shovel shaped incisors is a trait observed in 90 per cent of Asian and Native American populations but occurs in less than 15 per cent of white and black populations (Byers 2002:160). This trait is characterized by marginal lingual ridging. Although most pronounced on the medial aspect of the right I^1 , both maxillary incisor impressions display marginal ridging. The presence of this trait offers further evidence to the ancestry of the child whose impressions are still visible approximately 1000 years after they were made.

References Cited

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