Oxen at Oxon Hill Manor:
Identifying Draught Cattle from the Archaeological Record of Colonial Maryland

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Introduction

Situated on the bluffs overlooking the Potomac River, Oxon Hill Manor was a typical eighteenth-century Chesapeake tobacco plantation. In the face of fluctuating tobacco prices, many Chesapeake planters, including those at Oxon Hill, shifted from land clearing and tobacco production to the production of annual crops—such as corn and wheat—and the care of livestock in the mid-to-late eighteenth century. In contrast to tobacco cultivation, the cultivation of wheat and other grains relied on plowing and, thus, on animal labor. This research uses methodologies for assessing the pathological and osteometric indicators of draught exploitation on the eighteenth-century cattle bones from Oxon Hill Manor.

Methodologies

Using Bartosiewicz, Van Neer, and Lantacke’s (1997) methodology, this research examines pathological manifestations on cattle metapodials and phalanges from an eighteenth-century well and possible smokehouse at Oxon Hill Manor. For each complete element, the pathological index (PI) was calculated using the formula:

\[ PI = \frac{\text{sum of the scores from each type of pathology}}{\text{number of variables}} \]

The PI can range from zero to one, with one being the most severely pathological manifestations on cattle

Abstract

The methodologies for identifying and analyzing draught cattle from the archaeological record have been developed and refined over the past twenty years. However, little research has been done which applies these methodologies to faunal assemblages from the New World. This research identifies possible draught cattle from an eighteenth-century well and a posterior smokehouse at Oxon Hill Manor in Prince George’s County, Maryland, using pathological and osteometric analyses. Analyses of pathologies on metapodials and phalanges identify which specimens most likely came from individual animals for draught use. Osteometrics delineate the sex ratios of cattle in the archaeological record, thus providing a means for assessing the husbandry strategies in regions where draught cattle were used. As Oxon Hill Manor was home to an elite upper class farming family, the site provides a unique opportunity to explore the changing roles of draught oxen with the shift from tobacco to diversified agriculture in the last half of the eighteenth century. Additionally, the documentary record from Oxon Hill Manor provides a means to test the reliability of these methods for identifying draught cattle from British North American faunal assemblages.

Results

A total of 273 cattle lower leg bones or bone fragments from Oxon Hill Manor were assessed. Of this total, 228 bones were complete enough to allow for the calculation of the pathological index. Eight bones from the 5 contexts had pathological indices which were significantly higher than those of the other bones from that context, suggesting that these bones may have come from draught oxen.

Pathology | Scoring | Elements Assessed
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Proximal Exostoses | 1-4 | Metacarpal, Metapodials, Phalanges I, II, III
Proximal Lipping | 1-3 (metapodials) | Metacarpal, Metapodials, Phalanges I, II, III
Proximal Osteolysis / Exostosis | 1-2 | Metacarpal, Metapodials, Phalanges I, II, III
Striated Facet Near Proximal Surface | 1-2 | Metacarpal
Transverse Striations on Medial / Proximal Surface | 1-2 | Metacarpal
Depression on Palmar/Plantar Surface Near Distal End | 1-3 | Metacarpal, Metapodials
Distal Exostoses | 1-4 | Metacarpal, Metapodials, Phalanges I, II, III
Broadening of Distal Articular Surface | 1-4 | Metacarpal, Metapodials
Distal Osteolysis / Exostosis | 1-2 | Metacarpal, Metapodials, Phalanges I, II
Fusion of the 2nd Metacarpal | 1-2 | Metacarpal

Only 12 distal metacarpals were recovered from the eighteenth-century deposits at Oxon Hill Manor, so the distal breadth of these elements were graphed together to give an idea of the sex distribution. The distal breadths of the metacarpals show a clear bimodal distribution, suggesting the presence of females and males in the Oxon Hill assemblage without distinguishing which males may have been bulls and which may have been steers.

Discussion

The mid-eighteenth century shift towards mixed grain production at Oxon Hill Manor is seen directly in probate inventories from 1727, 1765, and 1775. While oxen and are absent from the 1727 inventory but are present in both of the later inventories. One expects the faunal data also to show a gradual increase in the usage of draught oxen through time. However, when the faunal data are organized chronologically, the average pathological index is higher in the second quarter of the eighteenth century than in the third. There are also more outlying pathological indices in the second quarter of the eighteenth century, possibly indicating more draught oxen during this earlier period.

Conclusions

This research marks an important step in bringing novel methodologies to the fore in zooarchaeological analyses of New World assemblages. By identifying and understanding the many roles which animals played at colonial North American sites, including those of traction animals, one can better understand the intricacies of the plantation landscape. From the eighteenth-century assemblages of Oxon Hill Manor, one may see the first glimpses of change in husbandry strategies and agricultural productivity. Understanding the increased importance of draught cattle on Oxon Hill Manor as indicated in the 1765 and 1775 inventories, likely because of the relatively small sample size.

Acknowledgments

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