**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 Patomac 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 secondary 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 Lantackner’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:

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\text{PI} = \frac{\text{sum of the scores from each type of pathology \times number of variables}}{(\text{maximum score} - \text{number of variables})}
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The PI can range from zero to one, with one being the most severely pathological and osteometric indicators of draught exploitation on the eighteenth century.

**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 possible 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 individuals used for draught oxen. Pathological and osteometric analyses 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 planting 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.

**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.

**Osteometric analyses of the metapodials were used as complementary, but indirect, evidence of draught exploitation. Measurements were taken of fully fused metapodials from Oxon Hill.** Because of their weight-bearing functions, metapodials can be distinguished amongst cattle, bulls, and steers. DNA tests confirm that the distal breadth of metacarpals is strongly correlated with the sex of the individual. The sex distribution of individuals at Oxon Hill Manor is closely related to the husbandry strategies of the plantation, including the keeping of cattle as draught oxen.

Only 12 distal metacarpals were recovered from the eighteenth-century deposits at Oxon Hill Manor. Of the distribution of individuals at Oxon Hill, as the distal breadths 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. 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.

**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 intracies of the plantation landscape. From the eighteenth-century faunal assemblages of Oxon Hill Manor, one may see the first glimpses of change in husbandry strategies and agricultural productivity. This zoological metacarpal likely from a male draught oxen used in plowing mixed grain production. When the results from this study are combined with studies of other eighteenth-century Chesapeake assemblages, including those from the last quarter of the eighteenth century, it is hoped that the faunal data will verify the claims made in the historic documents of the increased importance of draught oxen throughout the century. In this way, these methodologies will receive the attention they deserve in the zooarchaeology of British colonial sites and will be incorporated elsewhere to further our understanding of animals’ changing roles in past societies.

**Acknowledgments**

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