Central Ohio Archaeological Digitization Survey (COADS)

COADS is a large-scale, systematic effort to engage private collections in one small geographic area to enrich the official record of the pre-contact period archaeology in the region. This initial 2-year effort is funded by the National Science Foundation and has already documented over 14,000 artifacts and 300 sites. All materials are documented digitally (2D images) with a random 5% sample 3D scanned. We summarize methods, progress, public response, and a preliminary comparison to previously documented records. With over 10,000 artifacts and 80 sites in Ross County, we can conduct a coarse comparison to the previous OAI records and our newly recorded sites and materials.

Abstract

Methods

Each collection is 2D and 3D documented in the field, which is usually the collector’s home. Attributes that cannot be identified in 2D images are measured in the field, which include maximum blade thickness (± 0.01 mm), weight (± 0.1 g), and raw material (Figure 2-3). Lithic sourcing is conducted with a comparative collection and 25x magnification (a jeweler’s lens).

Rather than capture photographs, which require the setup of a camera tripod and lighting, COADS uses a flatbed scanner with graph paper to capture two dimensional images of bifaces (“front” and “back”). Flatbed scanning is more efficient and portable in the field than a photo-station. All scans are captured at 600 DPI or higher (Figure 4).

Collectors are interviewed and asked about their collection, the acquisition history of their artifacts, and the location of sites from which the artifacts came. Location precision of collections is organized into five classes from most to least precise: 1) site identified by survey supported with maps, photographs, and/or notes; 2) same precision as 1, with only a reliable informant supporting accuracy; 3) identification of artifacts to property, parcel, or field; 4) collections with known locations, but no link between specific artifacts and locations; 5) county or township level provenience. These classes also reflect the priority of data capture in the field of collections; collections without county-level provenience are excluded from COADS, while the primary goal is to capture as much of class 1 provenience as possible. Within Ross County, the collections provenience of artifacts ranges from level 1 to 3.

Introduction

Subsistence strategies and their impacts on residential mobility and tool use lives are written at the landscape scale; patterns are not composed merely of “habitation” sites (Nolan 2014). While settlements shifted, changes in the location of resource harvesting sites, and difference in overall mobility impacted resource use. Large-scale activity distribution patterns are “driven more by resource collection and extraction than by” (Nolan 2014:32) habitations.

Diagnostic points at once register age, activity, resource management, and land use. They are also abundant in Ohio’s archaeological record. The distribution of points by type obviously reflects changing prehistoric patterns of land use. But, using geometric morphometric methods, tools themselves can be analyzed for variation by toolstone and resharpenting allometry, and to document “morphing” from one to another type.

COADS is based on collaboration with private artifact collectors, focusing on assemblage distributions and temporally diagnostic projectile points. The study region (Figure 1) consists of Fairfield, Fayette, Franklin, Hocking, Licking, Madison, Pickaway, and Ross Counties. As much as 90% of informative artifacts, such as projectile points, are held in private archaeological collections (Shott 2008, 2015).

Historically, we have wrung our hands about collectors and blithely ignored the tremendous aggregate data that reside in their collections. We must stop pretending that our comparatively small databases, the product of diligent effort to high standards, somehow are sufficient when private collectors possess the vast majority of the diagnostic artifacts that provide the fuller context that progress in research requires.

Figure 1: Map of Ross County sites with OAI sites

Ross County

Ross County is home to 1015 sites in the OAI (see Nolan 2014) including the iconic Hopewell Earthworks (Figure 5). COADS documented over 10,000 artifacts from the county, including Gary Argabright’s collection with 82 locations. Here we compare the distributions of these two samples of sites with respect to choice of setting.

The OAI and collector sites show the same patterns of slope usage (X2=5.8, df=4), the latter with a slightly more pronounced preference for A and B slopes (Table 1). There are slight preferences for occasional flooding and well drained soils among the privately recorded sites, but no significant difference in location with respect to drainage (X2=8.4, df=5, flooding vs. X2=4.5, df=2), or ponding (X2=0.2, df=2; note low count cells). There is a pronounced preference for soil loam in the private collection (X2=456.3, df=3; collapsed small cells) though with low association (V = 0.65).

Collector and the OAI site distributions overlap substantially in coverage. We do see some several areas as that this collector examined that have not received professional attention and several areas that are dominated by unidentified prehistoric sites have been documented in detail by the private collection (Nolan et al. 2018).

Acknowledgments

We gratefully acknowledge funding from the National Science Foundation (BCS 1723879 and BCS 1723873). We would not be able to do this without the help of Dr. Jonathan E. Bowen, Gary Argabright, Dick McClish, the following chapters of the Archaeological Society of Ohio: Flint Ridge, Madison City, Six River Valley, Standing Stone, and the numerous collectors who have invited us into their homes and allowed us to document their collections and associated information. We acknowledge the following individuals and groups for their participation: Gary Argabright, Don Balfaser, John Bamburt, Fayette County Historical Society, Licking Valley Heritage Society, Dick McClish, John Mears, Moudford Farm, Quiverfull Farm, Tom Schroeder, Robert Wrayley, and two collectors who have chosen to remain anonymous.

References


Table 1: Ross County Data

<table>
<thead>
<tr>
<th>Slope</th>
<th>Site</th>
<th>OAI</th>
<th>COADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>600</td>
<td>601</td>
<td>602</td>
</tr>
<tr>
<td>A</td>
<td>506</td>
<td>507</td>
<td>508</td>
</tr>
<tr>
<td>B</td>
<td>509</td>
<td>510</td>
<td>511</td>
</tr>
<tr>
<td>C</td>
<td>512</td>
<td>513</td>
<td>514</td>
</tr>
</tbody>
</table>

Figure 3: Andrew Weiland collecting data in the “field”