

Shelf Life: Addressing the “Curation Crisis” through the use and re-evaluation of archival collection material

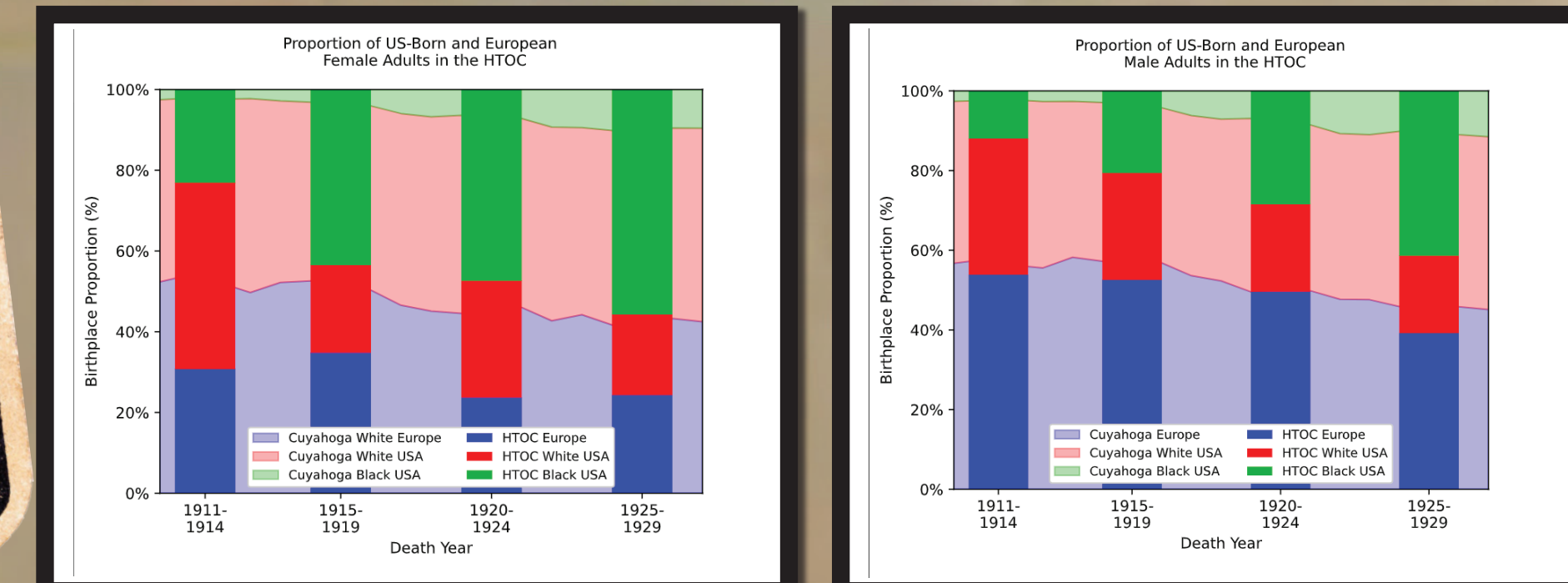
Phillip Mendenhall, MA, RPA and Alysha Lieurance, MA



Case Study

Death certificates for individuals in the HTOC from 1911-1929 were pulled from transcribed image indices in the Ohio Deaths 1908-1953 hosted by FamilySearch and baseline data for Cleveland was established from the same collection. Individuals included in the HTOC were identified via their burial place which was listed as Western Reserve University on the death certificates. The distribution of Black US-born, white US-born and white European immigrant individuals in the HTOC from 1911-1929 was compared to the broader distribution from Cuyahoga County death certificates.

These findings show that the HTOC is not representative of Cleveland, with an overrepresentation of Black male and Black female individuals when compared to the background population. The increase in Black individuals within Cleveland over time is likely attributable to the Great Migration (Cobb 1935, de la Cova 2019). However, the overrepresentation of Black US-born individuals in this collection (31.6% US-Born Black) when compared to the background population (7.6% US-born Black) could indicate that, despite coming from similar socioeconomic situations as their white contemporaries, Black Clevelanders were disproportionately affected by Ohio anatomy acts used to claim bodies for medical study. Additionally, the re-introduction of nationality data complicates the white racial category revealing significant heterogeneity within that category. This work has both provided a new analytical category for biomedical studies done on the HTOC collection and generated new research directions addressing the impact of anatomy laws on the historic Black communities of Cleveland.



Leveraging public and historical documents to re-analyze well documented collections

Kersel (2015) questions if a paradigm shift in archaeological focus from excavation to processing, publication, and curation is necessary to address the ongoing “curation crisis” in archaeology. Though archaeologists have spawned a variety of theory-based strategies to address this; such as reconceptualizing curation as a form of research (Voss 2012), utilizing object biographies (Frieberg and Huvila 2019), and studying the formation processes of collections (Platt and Warner-Smith 2024), prospective researchers are left to face funding bodies that tend to support archaeological fieldwork (and the methods therein) over post-excavation processes and other collections based research (Kersel 2015). To gain funding researchers must establish that their approach to studying existing collections can generate novel findings whilst mitigating issues of poor documentation and preservation. Here, we present several strategies for engaging with existing archaeological collections through a series of 3 case studies.

The Hamann-Todd Osteological Collection (HTOC) is one of the best documented and well-studied historic human skeletal collections available and has been foundational to methods development in forensic anthropology and bioarchaeology. Considering the collection itself is approximately 100 years old and has been the subject of research for the duration of that period, one might assume that there is little novel information to be gained from new analyses or re-analysis. Despite its longevity, many of the studies done on the HTOC have replicated Black/white racial binaries and have assumed that the HTOC is approximately representative of a U.S. population (Henderson and Cardoso 2018). Here, the reassociation of public records with the skeletonized individuals can be used to generate novel research questions concerning the formation and representativeness of the HTOC (Watkins and Muller 2015).

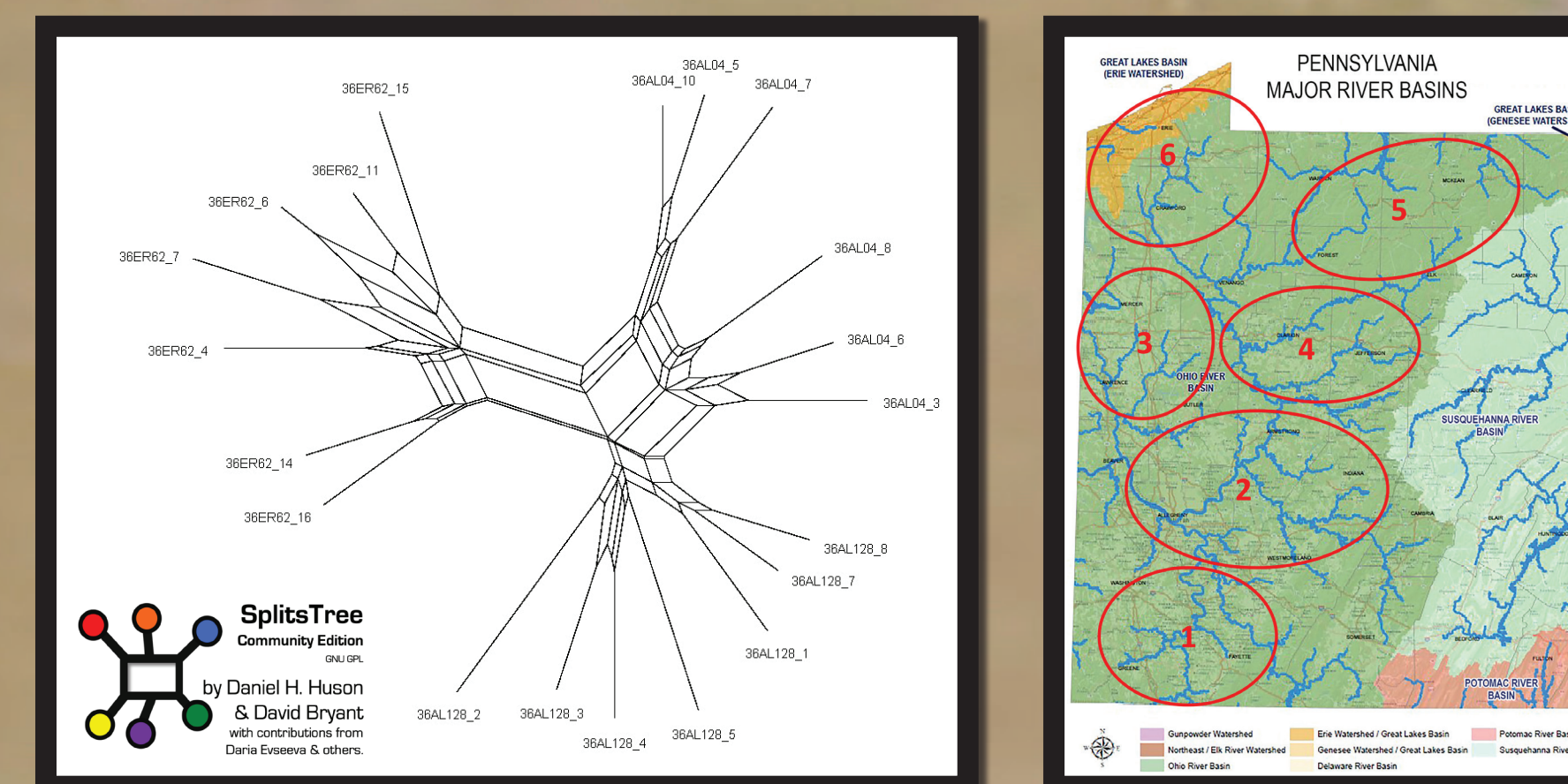
Case Study

Cultural Phylogenetics as a tool to measure exchanges of selective cognitive functions in eastern Woodland Period hand-built ceramics

Three extant collections at the Grave Creek Archaeological Complex, Moundsville, WV, the Pennsylvania State Historic Preservation Office, Harrisburg, PA, and the Carnegie Museum of Natural History, Pittsburgh, PA, are being used to evaluate the exchange of two sets of hand-built ceramic attributes among communities in the Upper Ohio Valley during the Early and Middle Woodland Period.

Motor-skill attributes of ceramic production (i.e., vessel paste, temper, firing temperature, and cordage-twist method) are more conservative than stylistic attributes (i.e., décor and vessel shape) for community-level manufacture of hand-built wares (Gandon et al. 2020, Manem 2020). The former category of vessel production attributes is more resilient to extra-community influence as ceramic construction techniques are often concealed by the latter group of exterior modifications. The creation of a chaîne opératoire variable dataset to segment motor habit operational sequences and to define patterns of localized continuity, which then incorporate horizontal stylized attributes. It can be measured through the use of cultural phylogenetic methods to create percolations, the chronological and geographic clustering of “giant components”, or when individual nodes (habitation sites) form a community of frequent interaction with another community (Barabási 2003:18).

The preliminary phase of research has identified six regional supra-communities within the Upper Ohio Valley based on the analysis of 1,034 rim sherds found to be a unique specimen for each of the 48 sites analyzed. Results have shown nested degrees of community interaction through the exchange of specific stylistic attributes and large proportions of shared motor-skill preferences (Mendenhall 2023).



Applying cultural phylogenetics to extant collections to study nested degrees of community interaction

Large regional collections housed in state and local repositories offer a wide range of research opportunities, but are often hampered by inconsistent supporting documentation, collection strategies, and conservation conditions. Making use of large collections in the condition that they are in has not been a problem overlooked archaeological research (Frieman and Janz 2018) and studies focused on environmental research (St. Almand et al. 2020), household archaeology (Sanchez 2021), historical diaspora communities (Nishimura 2020), as well as efforts to decolonize legacy collections housed outside their places of origin (Sawchuk and Prendergast 2023).

An emerging method, cultural phylogenetics, which repurposes software originally developed to track genetic variation amid contemporaneous species and between different biological taxa across geologic time periods (Mace et al. 2005). Examples of recent archaeological applications of this approach include analysis of temporal and spatial variation of indigenous architectural features in British Columbia (Prentiss et al. 2020), and Late Bronze Age ceramic motor-skill and stylistic variation between southern British and northern French sites (Manem 2020). Benefits of this statistical method include its use in open-access software (Splitstree4 and Dendroscope3), the ability to look at artifact relatedness in both space and time simultaneously, and its ‘evolutionary’ ability to look at artifact reticulation (Huson and Bryant 2006). The latter application is also known as a ‘braided stream’ changes to artifact seriation, such as when particular artifact attributes disappear from linear typologies and then reappear in later specimens.

Case Study

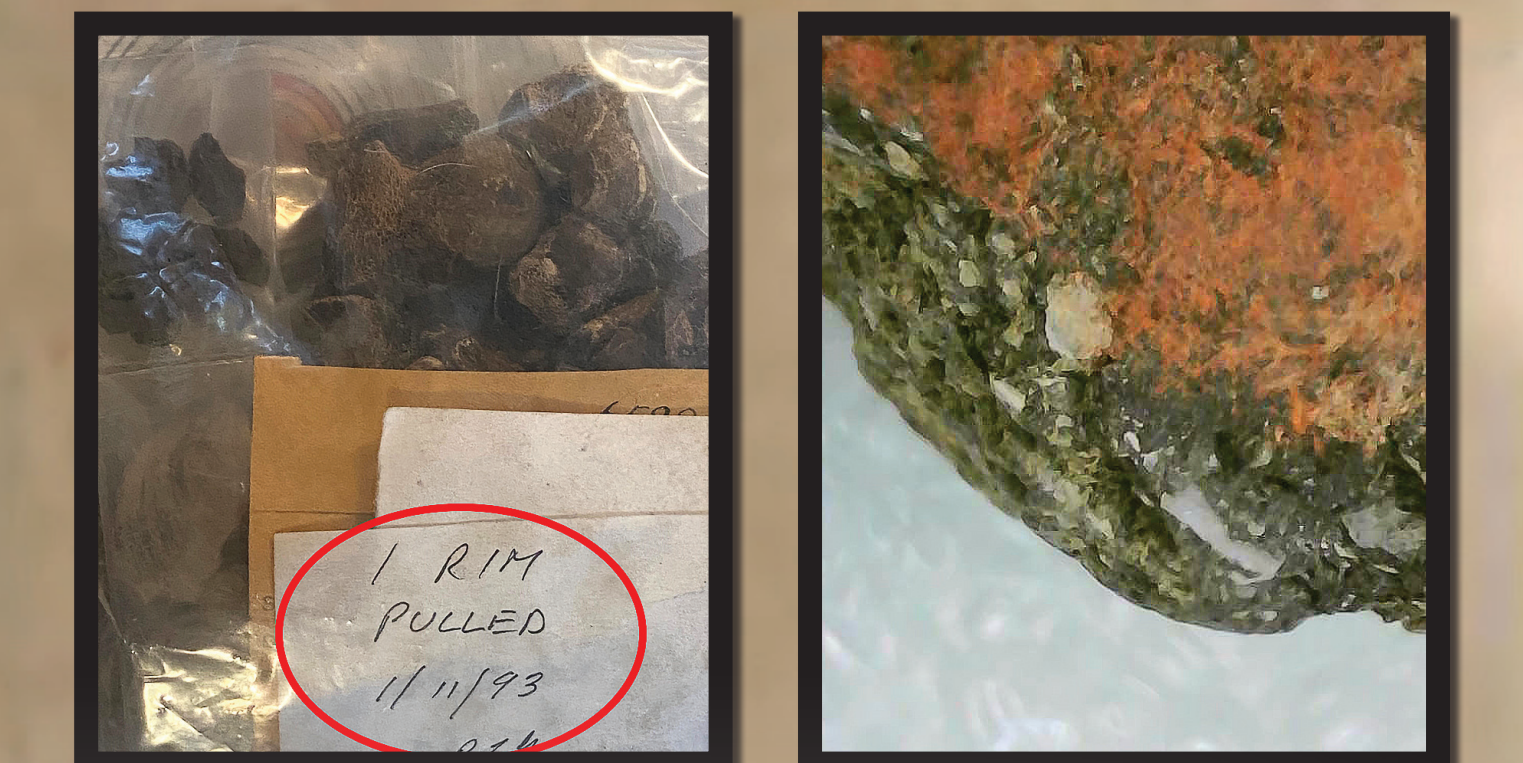
Chronotyping Extant Collections

Many extant archaeological collections are researched to provide additional information to on-going excavations and to retrieve original documentation related to particular archaeological sites. Material provenience and related documentation often hinder original research based on archival collections. However, there are methods and strategies available to make use of extant collections as the primary source of archaeological investigations.

One method involves the repurposing of a field sampling strategy termed chronotyping, which was developed by the Sydney Cyprus Survey Project (SCEP) to manage artifact-dense surface sampling (Given and Knapp 2003). In the field version of the method, duplicate specimen types were removed from surface collections to reduce the volume of sherds collected (a representative sample) found within each survey grid. Each identifiable specimen type had one sherd to support the presence/absence of local timelines and imported wares.

In this case, the extant collection was treated as the method in which it was obtained, an arbitrary collected surface scatter of material, and was not inhibited by missing duplicate specimens that would skew results related to artifact density studies. Chronotyping a previously collected surface scatter allowed for some documentation and contextual problems related to older collections, allowing previously unused site data to provide new information

Making use of poorly documented collections and the chronotype sampling method



The fact that a large proportion of earlier retrieved archaeological collections lack proper documentation, or are in poor archival condition, will not raise many eyebrows. Many public and private collection facilities have conserved material culture for more than a century and maintain their collections in a variety of conditions (Dutton 2013). Conservation methods to preserve and store material culture have been steadily improving since the early 1980’s (Marquardt, Montet-White, & Scholtz 1982; Kersel 2015), resulting in improved stability for sensitive material, greater accountability of housed collections, and accessibility. However, the long-term use and function for conserving large amounts of archaeological material, especially from locales that were not properly documented or consist of common material (i.e., lithic flakes, common ceramic sherds, etc.) is a matter of debate.

Some archaeologists and museum professionals have called for the reduction of large collections to mitigate long-term conservation costs, lack of space, and the usefulness of such material after retrieval (Domeischel and Waggle 2020; Merriam 2008; Paul 2021; Schacht 2008; Sonderman 2022; Terry-Childs, Kinsey, & Kagan 2010). Large quantities of lithic debitage, although resilient to deterioration and even neglect, can consume a large volume of space and material weight on collection shelving (Childs 2022; Sullivan and Childs 2022). However, utilizing collections in repositories has received new interest (Allan and Ford 2019; Stone 2018; Schiappacasse 2019), but rely on traditional methods of researching archived documents and artifacts (Matos et al. 2014), which involves the reinterpretation of identified artifacts, researching missing information (i.e., soil context, specific location, etc.), and making do with existing documentation.

[Expiration Date 1]
“It’s already been studied”



[Expiration Date 2]
“You won’t find anything new”



[Expiration Date 3]
“The site is too poorly documented”



Bibliography

