

**MA Thesis – Human Skeletal Biology Track, Physical Anthropology - New York University  
(2016)**

**POPULATION CONTINUITY OR REPLACEMENT IN THE LOWER SUSQUEHANNA  
VALLEY: A BIODISTANCE STUDY USING DENTAL NON-METRIC TRAITS**

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**Abstract**

The people of the Shenks Ferry culture occupied the Lower Susquehanna Valley of Pennsylvania during the Late Prehistoric (1300-1600 c.e.). Their origin and tribal affiliations are unknown yet pottery types, settlement patterning, and burial practices all serve to define the Shenks Ferry culture in the archaeological record and differentiate them from other groups. By the end of the 16th century the Susquehannocks, an Iroquoian tribe, migrated from New York state to the Lower Susquehanna Valley where they come in to contact with the Shenks Ferry people. After a brief period of cohabitation, Shenks Ferry material culture quickly disappears from the archaeological record, replaced by Susquehannock material. Traditionally, this has been interpreted as evidence of total population replacement, the Susquehannocks invaded and killed off or otherwise displaced the Shenks Ferry people. However with no evidence of violence or destruction at Shenks Ferry sites, it is plausible that the Shenks Ferry people were assimilated into the Susquehannock population. A biological distance study provides a complementary, yet unexplored, line of evidence to investigate group interactions in the Lower Susquehanna Valley.

In this study, I compare dental non-metric traits of four Shenks Ferry and four Susquehannock groups to investigate the nature of the interaction between populations. Biodistance studies of dental non-metric traits have been found to strongly correlate with genetic data and have been used to investigate group interactions and assess how populations change over time. I scored traits following standards of the Arizona State University Dental Anthropology System and use mean measure of divergence to quantify differences between the groups and assess significance, as well as multi-dimensional scaling and cluster analyses to visualize inter-group relationships. Overall, distances were relatively small between groups yet they were found to cluster by cultural affiliation (i.e. Shenks Ferry/Susquehannock). While I found no evidence that the Shenks Ferry people were incorporated in to the Susquehannock population to any substantial degree, their similarity indicates a recent shared ancestry and could point to an Iroquoian affiliation for the Shenks Ferry culture. My results are consistent with the archaeological evidence and support a model of rapid replacement of the Shenks Ferry people by the Susquehannocks shortly after their arrival to the region.