

Abstract

Stone tools and their waste products, due to their durability and their importance to everyday prehistoric life, are key elements found in archeological sites. By knowing the locations of the stone outcrops and the distribution of the stones deposited in archaeological sites, researchers will attain a clearer understanding of prehistoric people's daily lives. In this study four stone materials, Burlington chert, Mill Creek chert, Cobden/Dongola chert, and Kaolin chert, are tracked from their outcrop location in southern Illinois to the archeological sites where prehistoric peoples deposited them. The raw material taken from these outcrop areas has been found as much as 100 miles away even when other sources of chert are closer. This is evidence of the choices made by prehistoric peoples for one chert type over another.

This research was conducted in order to understand the stone material selection process, the distance prehistoric people will go to obtain a specific chert type, and the temporal affiliation of these choices. Included in this study is an endeavor to find the most probable outcrop areas for each chert type. The outcrop prediction model broke down the landscape characteristics including slope, waterways, and geology and identified the areas of highest probability of finding these cherts. The research also sought to identify the distance chert was transported from its outcrop location. By using archaeological site chert data, the distance that the outcrop material was transported in the study area was identified. Additionally, a distribution pattern of the material across the landscape shows areas where each chert type was more heavily concentrated. Finally, by researching the distances and distribution of chert during specific cultural components, inferences made by archeologists concerning the distribution of these specific cherts are proven.