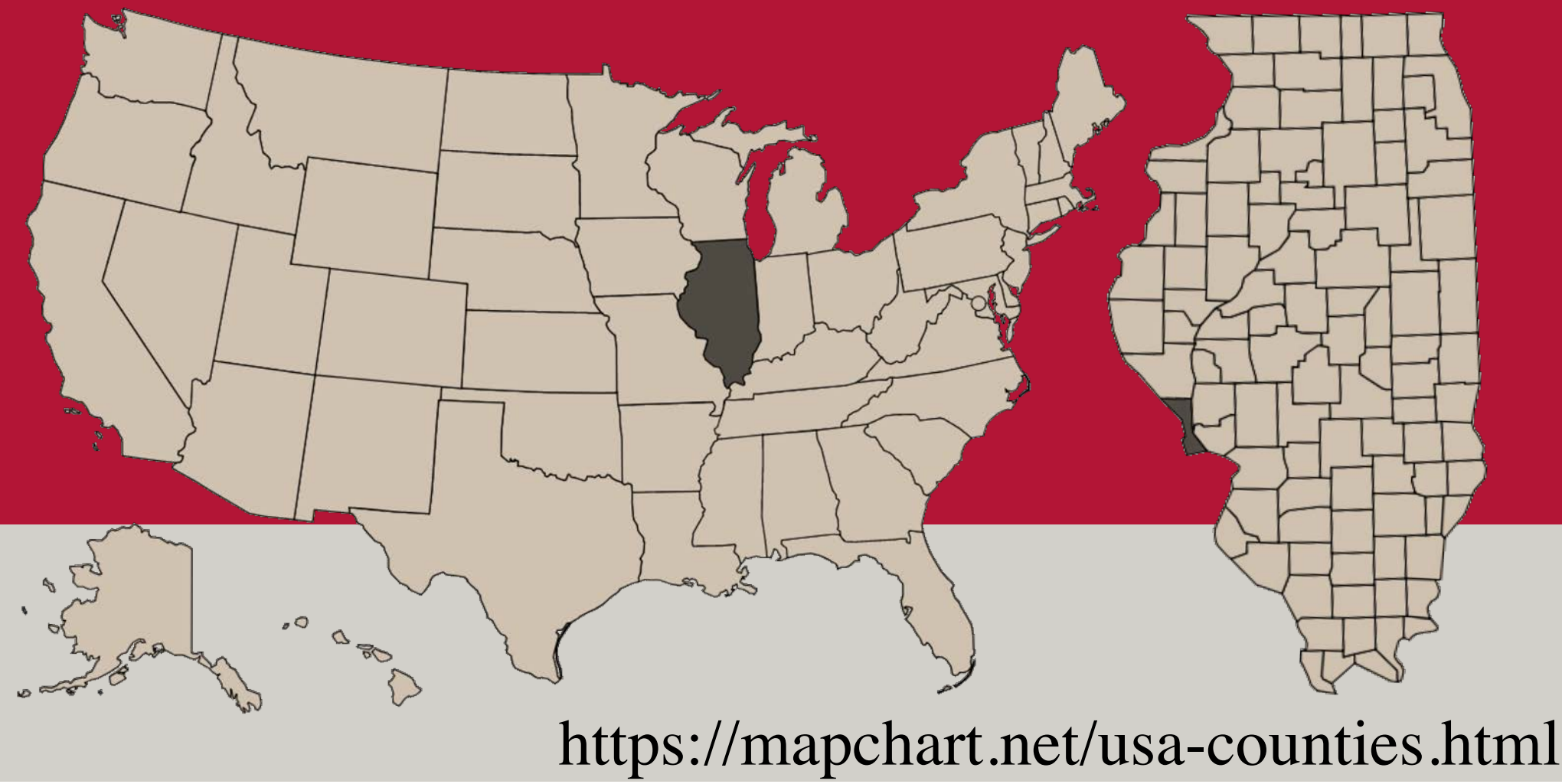


Center for American Archeology: REU 2018

The Golden Eagle Site (Illinois): An Attribute Analysis of Lithics



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RESEARCH QUESTIONS

1. How does lithic scatter change and accumulate through time at Golden Eagle?
2. How do lithic characteristics change throughout Golden Eagle?

BACKGROUND INFORMATION

The Golden Eagle site (11C120), Calhoun County, IL is a presumed Middle Woodland (50 cal BC—cal AD 400) mound and enclosure site located in the Deer Plain Terrace near the confluence of the Mississippi and Illinois River. Artifacts are uncommon at the site. Those present are from the Terminal Archaic through Mississippian periods. Lithics have been used throughout the valley to interpret technological, cultural, and chronological patterns. This is a preliminary analysis of lithics recovered at Golden Eagle since 2013.

Our goal is to understand lithic accumulation temporally and spatially in order to reveal cultural tendencies, which can help determine the function of the site on its own and in the greater context of the LIV.

METHODS

- ❖ Used a caliper, digital scale, and a hand lens
- ❖ Recording took place during the last week of July
- ❖ Looked at SQ 01 – 35, 37, 40, 42 - 43, 46 – 47
- ❖ Recorded (Figure 1):
 - ❖ Flake, cultural shatter, or natural shatter
 - ❖ Chert type
 - ❖ Number of artifacts per level
 - ❖ Weight of total chert type
 - ❖ Cortex
 - ❖ Uniface, biface, undistinguishable
 - ❖ Retouching
 - ❖ Heat treatment
 - ❖ Average thickness of chert type per level
- ❖ Used the square profile maps to look at stratigraphic continuity across the site.

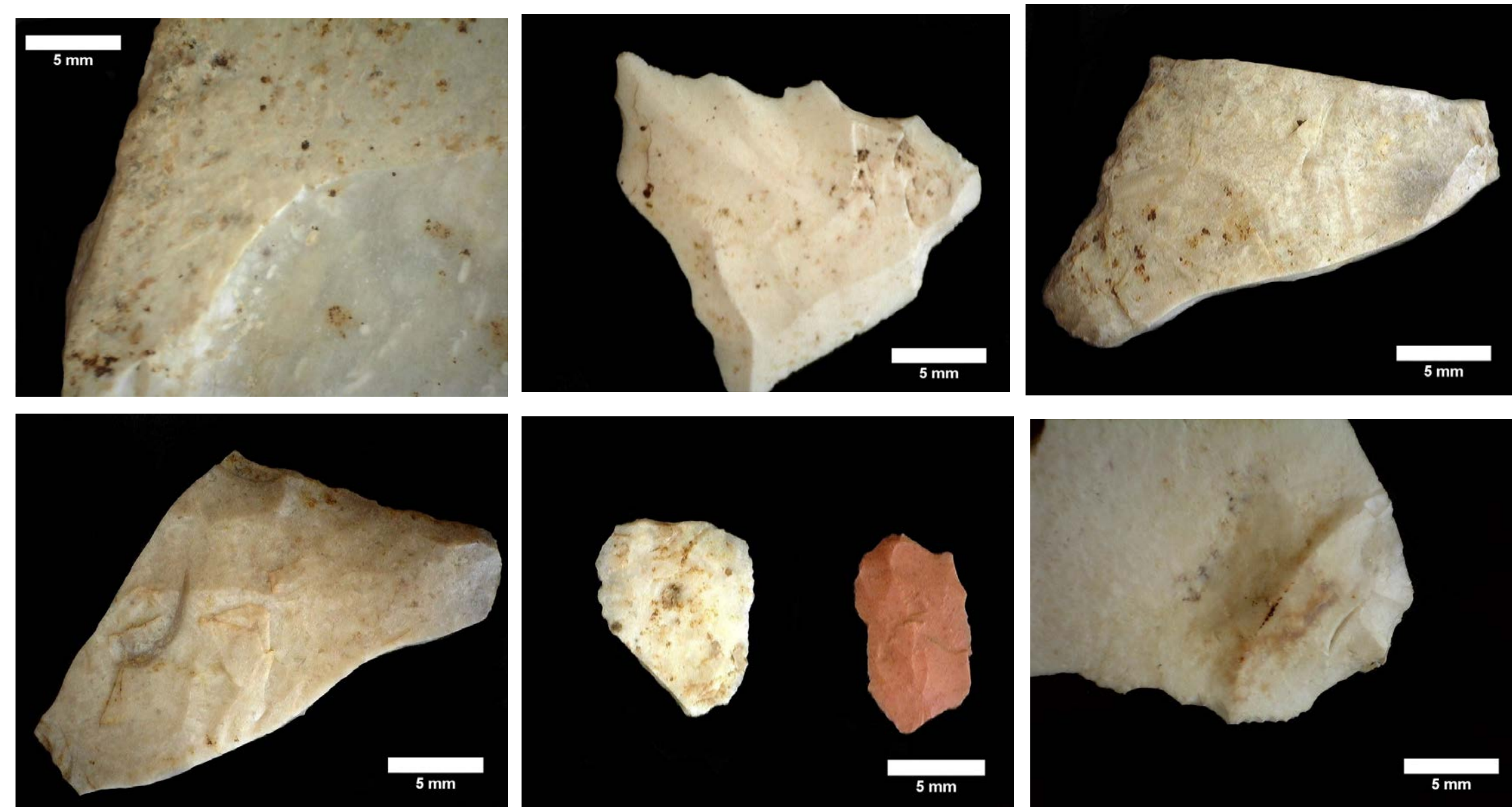


Fig 1. (right)

RESULTS AND INTERPRETATION

The assemblage of 2373 lithics consisted of 956 flakes, 822 cultural shatter, and 595 natural shatter. These were collected from archaeological units across the site, which have been given area designations (Figure 2). The debitage was primarily Burlington chert, but with evidence of raw material procurement from ~20 extralocal sources (Figure 3). Unifacial flakes and heat treatment were the highest recurring flake category and modification (Figure 4).

Debitage occurred most frequently in units near Mound 2 and the embankment earthwork. However, stratigraphically across the excavated areas of the site, debitage was mostly found in the plow zone and B-Horizon instead of the embankment stratigraphy (Figures 5 and 6). This suggests that the Plow Zone accounts for most of the debitage excavated on the embankment earthwork. Additionally, the distribution of flakes and their attributes suggest some spatial organization to the site. Few lithics are found outside or inside the enclosed space, unless those in the enclosure are situated around Mound 2 (Figure 7).

General time-attribute trends can be seen when comparing the B-Horizon and Plow Zone. Heat treatment increases between the two levels, retouching is fairly fixed, and the presence of cortex decreases slightly (Figure 8). However, research on the extent of agricultural plowing could assess this further.

While many more trends can be extrapolated from the data, we aimed to briefly address the major ones. Since little work has been done near this study area that concerns lithic debitage, rather than lithic typologies and technologies, finding an apt comparison for Golden Eagle proved difficult. Instead, we are encouraged by future curiosity and research that may use this data as a groundwork to further understand the lithic assemblage at Golden Eagle in time and space.

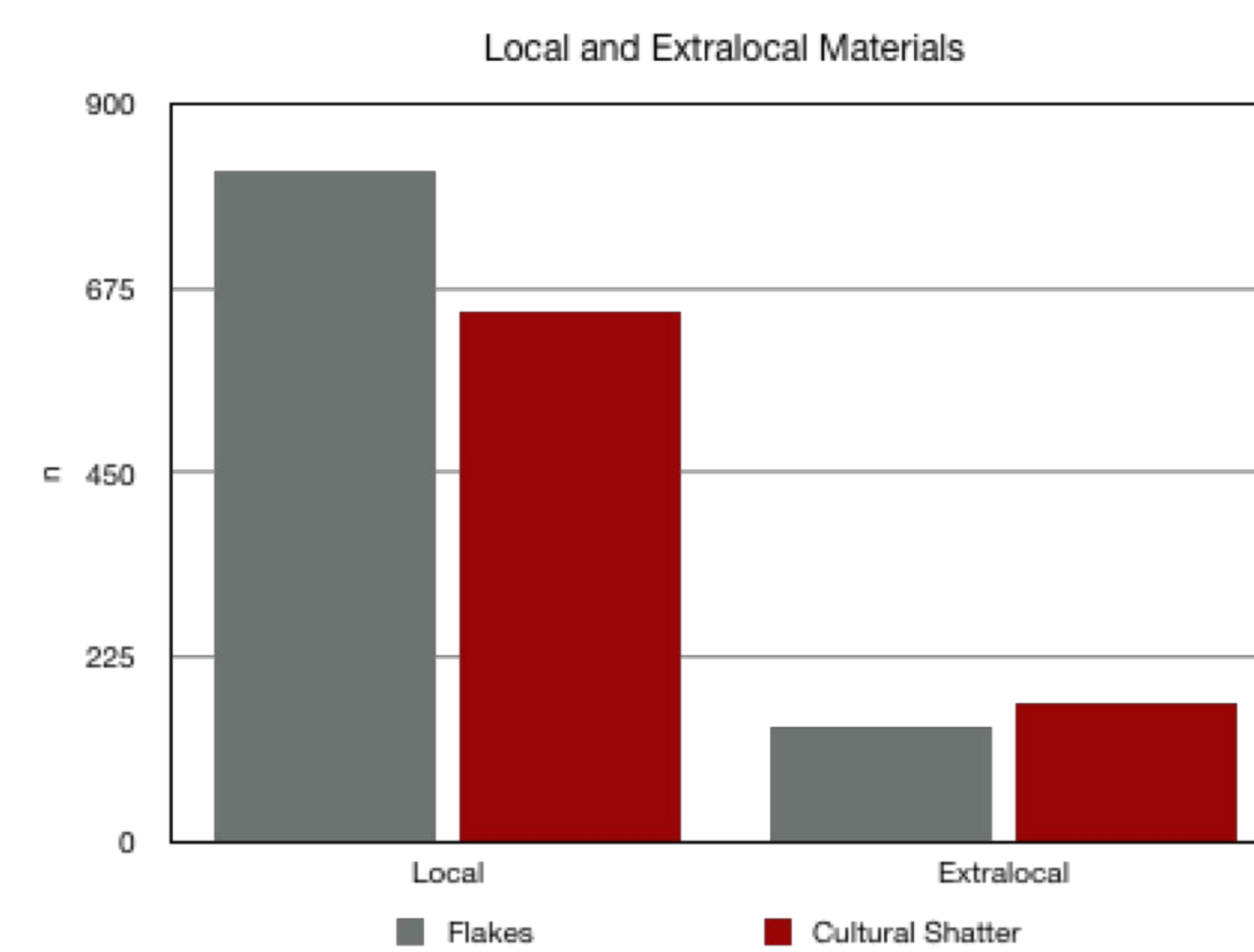


Fig 3.

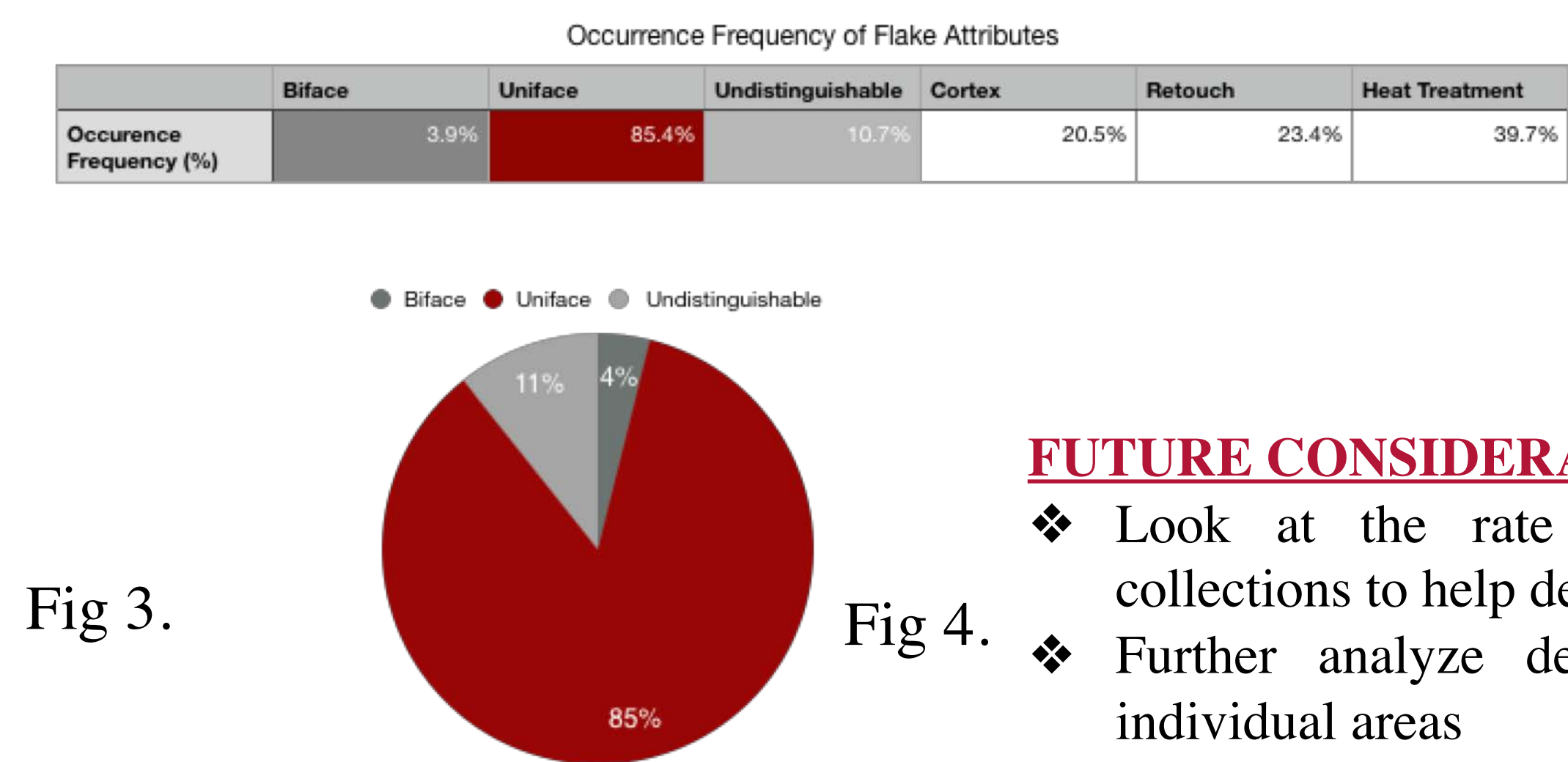


Fig 4.

FUTURE CONSIDERATIONS

- ❖ Look at the rate of sedimentation and type collections to help determine time depth.
- ❖ Further analyze depth trends of attributes for individual areas
- ❖ Deduce flaking episodes and lithic technology shifts
- ❖ A full attribute analysis involving more characteristics and methods to limit intraobserver error.

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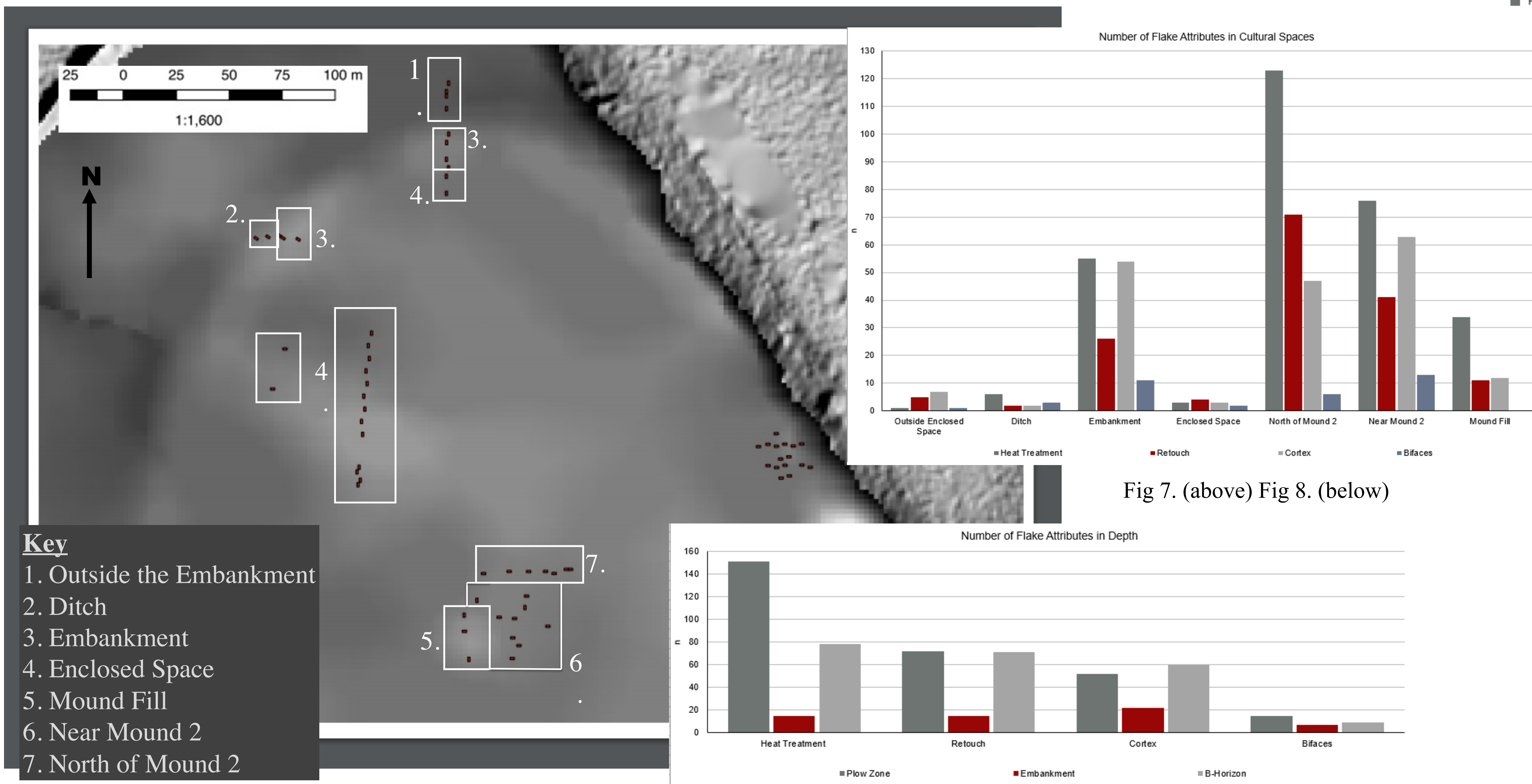


Fig 2. Site Map of Golden Eagle (11C120)

Fig 1. Read left to right: cortex example, uniface example, biface side 1 example, biface side 2 example, non-heat treated chert vs. heat treated chert, retouching example. Pictures taken using a dino-lite.