Hidden in Stone
Identifying Use-wear Traces on Lithic Tools
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In this poster, I present results of ongoing research that seeks to identify detailed information on plant working activities and related technologies hidden in wear patterns preserved on the edges of stone tools. We examined several polish and wear traces left behind by silica rich plants known to have been harvested by ancient Iowans in order to see the similarities and differences among them.

Findings

The aim of the project was to identify subtle variation in microwear features that may be exclusive to certain plants that can act as discriminant attributes. The consistent factor within all of the polish formations was brightness, which may be an attribute of silica polish. We found that the differences in polish formation could be attributed to both the composition of the plant material and motion of the tool.

Future research will involve comparisons between experimental tools and archaeological samples.

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Tool A
Contact Material: Cattails
Duration of Use: 3hrs 15min.

Tool B
Contact Material: River Rushes
Duration of Use: 3hr 15min.

Tool C
Contact Material: Cattail Tubers
Duration of Use: 2hrs

Tool D
Contact Material: Canary Reed Grass
Duration of Use: 2hrs

Tool A was in contact with a woody material, which is reflected in the wood like polish left on the stone surface.

Tool C has a flat striated polish due to the flat scraping motion of the tool.

Tool A Wear Comparison:
Bright Dense Domed Non-fluid Polish

Tool B Wear Comparison:
Bright Smooth Fluid Domed Polish

Tool C Wear Comparison:
Dense Flat Striated Polish

Tool D Wear Comparison:
Bright Domed Polish

Tool A Before Use
Tool B Before Use
Tool C Before Use
Tool D Before Use