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PLEISTOCENE ART OF THE WORLD

Short articles



LATE PLEISTOCENE PETROGLYPH TRADITIONS ON THE NORTH AMERICAN PLAINS

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Three well defined petroglyph traditions are present in the Late Pleistocene on the northwestern North American Plains. Two traditions, Early Hunting and Outline Animals, focus on Outline Pecked Animal images and likely belong to related, although geographically separate, cultural traditions. The third, the Hoofprint Tradition, predates them by several thousand years. It features completely different imagery made by abrading and incising, supplemented by some pecking. Although the latter tradition includes animal images, it also focuses on hoof prints, abraded grooves, vulvas, bear paws, and finely incised human heads shown in profile. The strong divergence between the Hoofprint tradition and the pecked animal traditions suggest that they belong to different cultural lineages or macro-traditions.

The evidence that these petroglyph traditions date from the Late Pleistocene is based on analyses of rock coatings, including both varnish and oxalate deposits. The most extensive experimental dating research for these early petroglyph traditions is on Early Hunting petroglyphs for which we have run dating assays on over 100 samples, along with limited tests of the methodology. Dating research on the Hoofprint tradition type site is still in progress, but the site shares the same sandstone and environment as the better researched Early Hunting sites. Two additional sites where pecked animal tradition glyphs have dating investigations are in western Wyoming, 400 km from the Early Hunting sites. Both sites are on sandstones that weather more rapidly than the sandstones in the Black Hills and fewer samples have been investigated for dating. Petroglyphs in all three traditions have varnish microlaminations that show Late Pleistocene varnish layers.

For the Early Hunting tradition dating research, we examined two thin sections of the varnish overlying several petroglyphs to check for consistency in laminations between subsamples. A wapiti image and a quadruped with large cloven hooves have the same lamination patterns on both subsamples, which show layers of orange varnish beneath a black layer that was deposited during the Younger Dryas. Another glyph, interpreted as a caribou because the antlers branch only at the tips, shows rapid varnish formation during the Late Pleistocene. None of the Early Hunting tradition glyphs identified by varnish microlaminations or experimental dating methods as Late Pleistocene depict extinct animals. The Early Hunting glyphs which date from the Late Pleistocene are the earliest in a long tradition that continued for 9000 or 10000 years, with gradual change through time in both motifs and style details. The theme of Early Hunting petroglyphs appears to focus on animal procurement or control and in Holocene panels becomes less symbolic and more narrative in depicting hunting situations and ceremonies.

The Outline Pecked Animal tradition also may begin near the end of the Pleistocene. Although some researchers have assumed that the Outline Pecked glyphs belong to the Early Hunting tradition, there are differences in the imagery. The two traditions are also geographically separated. A statistical comparison between Early Hunting and Outline Pecked glyphs shows no overlap in



Hoofprint tradition raised relief bear claw image superimposed by finely incised human head and abraded hoofprint.

a Discriminant Analysis. Key attributes that the statistics rely on to separate the two traditions are outline versus solid pecking, straight legs on Early Hunting versus bent legs on Outline Pecked animals, and bighorn sheep horns depicted in frontal view in Early Hunting versus in profile view for the Outline Pecked tradition. Even so there are similarities – such as the focus on animals and details like ball-shaped feet on cervids (even though they differ in being outlined versus solid pecked).

Both of these animal-focused traditions differ in motifs from the third Late Pleistocene tradition which predates them. Preliminary varnish microlamination studies suggest a date between 14 000 and 17 000 years ago. Petroglyphs on exposed surfaces at the site have heavy black rock coatings. More dating research is needed to develop a better understanding of the age and longevity of these petroglyphs. Although pecked images are present, abrading and incising are the dominant manufacturing methods for Hoofprint glyphs. A major theme focuses on abraded grooves, animal hoof prints, and vulvas. If control or procurement of animal resources or fertility and increase is the theme, depiction of the theme is radically different from how it is depicted in the pecked animal traditions. Hunting situations and methods appear in Early Hunting petroglyphs, while Outline Pecked glyphs show ranks of animals with few clues to symbolic meanings.

The Hoofprint tradition is the oldest rock art known for the study region. Later, it likely overlapped in time with the pecked animal traditions. Hoofprint imagery is so different from the pecked animal traditions that it must derive from a completely different cultural lineage. Post-Pleistocene sites with hoof prints are distributed widely within the historic territory of Algonquian and Siouan speaking tribes. In contrast, the pecked animal traditions resemble most closely rock art produced by Uto-Aztecan speakers who used solid pecking and often depicted animals and hunting situations. Not only do we have Late Pleistocene rock art on the northwestern Plains, but we have rock art likely made by different lineages of people. Clearly, multiple cultural traditions were already established in various regions of North America at the end of the Pleistocene.





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