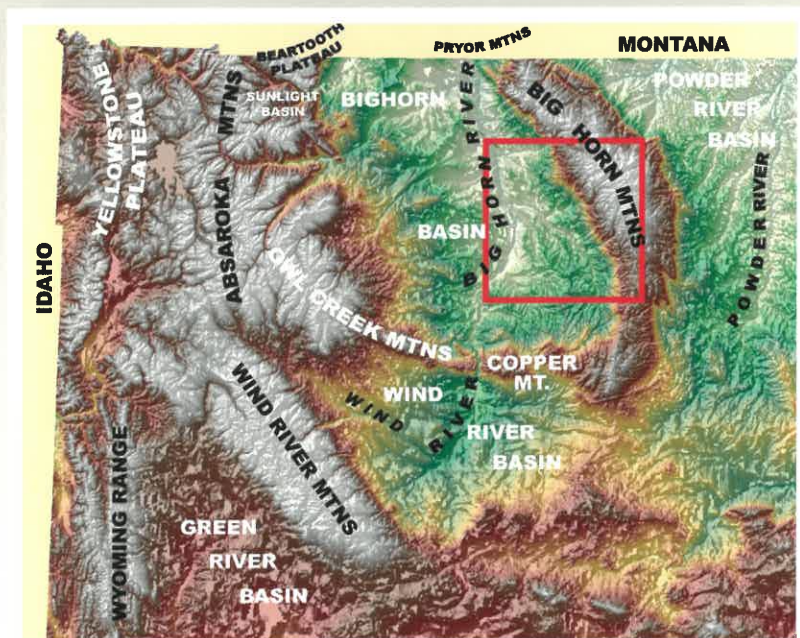


Medicine Lodge Creek

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By George C. Frison, Ph.D.

Between the Absaroka and Big Horn Mountains in northern Wyoming lies the Big Horn Basin, a 150-mile-long (240 km), oval-shaped topographic depression connected to the Northern Plains by a narrow corridor to Montana immediately to the north. The basin's location adjacent to the Absaroka Mountains and the Yellowstone Plateau to the west deprives the Big Horn Basin of moisture to the extent vegetation of the interior basin is more reminiscent of the Great Basin to the south and west than the Great Plains proper to the north and east. However, streams flowing from the surrounding mountains



The Big Horn Basin and surrounding areas, showing general boundaries of the Medicine Lodge Creek project (Base map courtesy Wyoming Geological Survey).



Left: Possible cache pits and an anvil stone from Area 2. Center: Medicine Lodge Creek petroglyphs. Right: Medicine Lodge Creek bead collection.

into the interior basin provide relief from otherwise unfavorable conditions for prehistoric human occupation. The presence of several environmental zones at the emergence of Medicine Lodge Creek into the interior basin created an unusually favorable location for past human occupation. These zones gave access to the plant and animal resources of both the foothills and the interior basin by the prehistoric inhabitants. The sandstone walls facing east at the site catch the first rays of the winter sun, and freshwater springs prevent ice from forming on the stream even during the coldest winter days. It is currently an ideal location for livestock in winter, a condition rapidly perceived by the early homesteaders.

A different set of conditions allowed the evidence for these human occupations to be preserved and available for study. One would have expected spring flooding from high-altitude snowmelt, along with flash floods in warm weather, to regularly scour the canyon to bedrock and erase evidence of any earlier human or other activity. This did not occur because massive rockfalls protected parts of the continually aggrading deposits containing undisturbed remains of human campsite activity from destruction by such fluvial activity.

A decision by the landowner in 1967 to level the ground surface at the base of the sandstone cliff for livestock corrals destroyed

parts of the later site deposits but also served to advertise the presence of the site for the first time. The leveling program exposed artifacts, some up to several thousand years old. However, the presence of earlier (Late Paleoindian) evidence came about only after archaeological testing of the deeper deposits exposed a complicated sequence of geological activities not yet fully studied or understood. We believe there are still undisturbed Paleoindian deposits at the site which should provide research potential for future students.

The eastern Big Horn Basin witnessed Early Paleoindian activity at the Colby site, an approximately 11,000-year-old Clovis-age mammoth kill. Following this, the 10,500-year-old Hanson site, a large Folsom site north of the Colby site, has also been studied. The 9,000- to 10,000-year-old Horner Site along the Shoshone River at the foot of the Absaroka Mountains in the western Big Horn Basin is a Paleoindian bison kill confirming the presence of extinct Early Holocene bison and sophisticated methods of communal human bison procurement. Subsequent to this, evidence of human activity in the interior basin diminishes, but the foothills and mountains surrounding the basin produced evidence of Late Paleoindian groups less oriented toward large mammal

procurement and increasing evidence of use of smaller animals and floral resources. These human occupations have been referred to as Foothill-Mountain Paleoindian. Medicine Lodge Creek yielded an 8,000- to 10,000-year-old stratified sequence of cultural diagnostics and radiocarbon dates associated with these Late Paleoindian hunting and gathering groups. Most recognizable diagnostics are lanceolate and stemmed projectile points. Present also are precursors of seed-grinding artifacts and food preparation along with storage features that proliferate in the post-Paleoindian period.

An abrupt change in projectile points from the lanceolate and stemmed varieties of the late Paleoindian to the notched varieties of the immediately following Early Archaic period is evident at about 8,000 years ago. Whether this was the result of outside or internal influences is still debatable. Stream activity removed and redeposited most of the Early Archaic diagnostics at Medicine Lodge Creek. However, undisturbed stratified deposits of these Early Archaic occupations are present in nearby rockshelter and open sites, allowing us to familiarize ourselves with the associated cultural diagnostics. Large blocks of Middle Archaic, Late Archaic, and Late Prehistoric deposits remained intact at Medicine Lodge Creek and provided a good sequence



Excavations in Area 2.

of diagnostic artifacts with associated radiocarbon dates. The site surface produced several European trade beads suggestive of limited protohistoric contacts. With the possible exception of the early Historic Period (and in contrast to the Great Plains north and east of the Big Horn Basin), there is little evidence bison were an important part of the prehistoric economy at the Medicine Lodge Creek site.

The large body of data recovered during the several years of investigations at the Medicine Lodge Creek site encouraged several peripheral studies. These include geoarchaeology, modern vegetation, obsidian and other tool and weaponry stone sources, faunal materials, ceramics, grinding stones, glass trade beads, and the large array of petroglyphs and pictographs on the sandstone walls. Collectively, the Medicine Lodge Creek data reveal a large body of information on the human Holocene occupations of the eastern Big Horn Basin.

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