

High-Altitude Archaeology in the Uncompahgre Wilderness

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Archaeological research carried out in Colorado's Front Range by Jim Benedict and his colleagues shows vividly that for millennia native peoples regularly visited high-elevation environments. Much less is known about the American Indian use of the San Juan Mountains, the largest expanse of alpine tundra in the Southern Rockies. To learn more about the archaeology of the San Juan high country and its relationship to the broader cultural landscape, Paleocultural Research Group and the Grand Mesa, Uncompahgre, and Gunnison National Forests in 2010 carried out a collaborative research project at the Uncompahgre Cirque site, an extensive quarry workshop located on the east flank of Uncompahgre Peak, the highest peak in the San Juans and one of just 54 in the state topping 4,267 m (14,000 ft). The research team included PCRG staff and students and U.S. Forest Service archaeologists and Passport-In-Time volunteers. A Forest Service Challenge Cost Share Agreement and a State Historical Fund Archaeological Assessment Grant provided funding for the work.



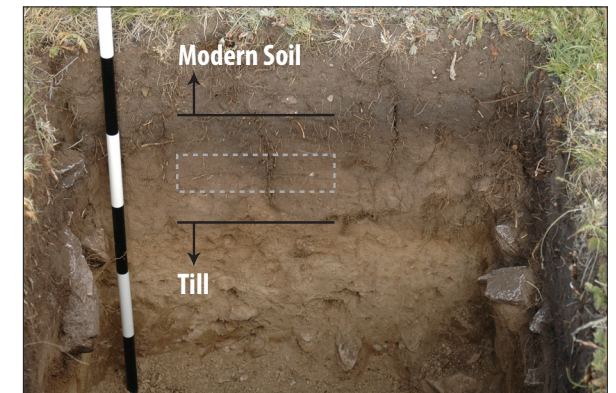
The Uncompahgre Cirque site is a dense scatter of flaking debris and stone tools covering roughly 1.1 ha of a turf-banked bedrock terrace at 3840 m. A large, productive source of moderate- to high-quality chert is located on a narrow ridge above the site, at roughly 3950 m. To sample the site's content, the research team opened five small test units in the remnant turf bank. A sixth unit was placed over a partly eroded hearth feature. The team also carried out a controlled collection of stone tools and flaking debris from the eroded lag surface surrounding the remnant turf patches.

Multiple lines of evidence—including radiocarbon dates, projectile point morphology, obsidian hydration rim thicknesses, and stratigraphic data—together indicate that the site was occupied briefly between about 5900 and 5700 years ago. All four radiocarbon dates from the site are statistically equivalent, yielding a weighted mean age of 5038 ± 19 ^{14}C yr B.P. At two standard deviations this mean age spans the period from 3944 cal B.C. to 3776 cal B.C., or a total of 168 calendar years. Hydration rim thickness distributions point to a brief occupation or a short series of brief occupations within this 168-year period. Stratigraphic data bolster the view that the occupation was brief. Artifacts mostly occur in a single zone near the base of a surprisingly well developed paleosol.

The major activity at the site was initial reduction of tool blanks for off-site transport. Transported items included large flakes, multi-directional cores, and both early- and late-stage bifaces. However, flint knappers at Uncompahgre Cirque also manufactured a variety of tools for on-site use in hide processing, woodworking, animal butchery, or other tasks. Some of the tools produced from local stone for on-site use were made

from heat-treated flakes or nodules, a surprising finding given the lack of nearby fuelwood.

An notable feature of the workshop is the presence of cores, tools, and flaking debris made from imported raw materials, including obsidian from northern New Mexico and quartzite, chert, rhyolite, basalt, and other materials likely from the Gunnison basin and central Colorado. The diversity of imported raw materials suggests that multiple groups from different regions



came together to use the chert quarry at Uncompahgre Cirque. Imported stone arrived at the quarry both as finished tools and as cores. Initial core reduction of imported stone is indicated by the presence of large, unused flakes bearing cortex. Exhausted cores of obsidian, rhyolite, and chalcedony also occur in the collection. Smaller flakes of imported stone indicative of tool manufacturing or maintenance also occur in the assemblage. These include large flakes produced during the later stages of biface manufacture as well as small flakes produced by pressure and soft hammer percussion during tool rejuvenation.