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EVIDENCE OF THE AMERICAN INDIAN  
USING STONE TO MAKE METAL ARTIFACTS

About one hundred fifty feet above the Snake River in South Central Idaho, near the present Upper Salmon Falls Power Plant, is one of the camp grounds of the Oregon Trail pioneers. Debris found at this site gives mute evidence of <sup>both</sup> the hardship of the pioneers and the ingenuity of the Indian. Today, our maps dismiss this place of history with the terse legal description of Township 8 South, Range 13 East, Section 3, East Boise Meridian.

Here, the immigrants were faced with a long and difficult climb to the top of the canyon and this spot, with its abundance of water and fish, was an ideal place to rest the animals and members of the wagon train party before hazarding the sinuous grade. The type and amount of debris found at the site indicates that the stay was brief, but long enough to repair the harness, wagons, water barrels, and make the loads "shipshape" before continuing the journey.

The Indians were keen observers - for, indeed, their very lives depended on their powers of perception - so, undoubtedly, they regarded very closely the activities of these interlopers with awe for both their many possessions and their knowledge of working metal. Masters in the art of making and using stone tools, they must have watched with fascination the White man wielding the coveted steel knife, working and straightening the metal of the wagon wheels and doing other metal work.

I first visited the camp about thirty years ago at the suggestion of "Daddy" Vader, a Hagerman pioneer, who told of seeing the flats near

Owsley's crossing covered with teepees, racks of salmon drying in the warm sun and the inhabitants busy catching fish and doing their many chores. I studied the flaking debitage at the Indian campsite - which has since been destroyed by road construction - and then went to the nearby campground of the Oregon Trail party. Over the years, it had been eroded by the prevailing West winds and many pieces of scrap iron, broken glass, wornout harness parts, flakes of flint-like material, stone anvils, four completed metal points, one broken aboriginal-made metal knife, bangles, and other metal artifacts in various stages of manufacture had been uncovered. (All material was surface collected and, to my knowledge, the site has never been excavated. Nor do I think it worthwhile at this late date, for the occupation of both the Red and White man was brief and the West winds have long since uncovered anything of interest or value.

After the pioneers had moved on, the Indians, instinctive and compulsive gleaners, visited the site to recover what, in their opinion, were treasures discarded by the wasteful White man. Among the "castoffs" they gathered up pieces of discarded iron and made them into projectile points, cutting implements, ~~br~~ bangles and other useful items.

The irregularity and character of the scars on the scraps of iron indicate that stone tools were used in the manufacturing process (and also demonstrates the progress of converting the raw material to the finished product - particularly the projectile points and the bangles) ( Fig. ). Two anvil stones with (typical) functional battering scars ~~were found~~ and several bruised and broken hammerstones, <sup>were found.</sup> No stone chisel was found at the site, but battered pieces of tough, silicious stone were comingled with the metal debris and pieces of scrap material bore highly irregular coarse

cuts indicating that the chisel was stone rather than metal. Scars on the metal are rough and concave, *indicating the use of* ~~typical of~~ striking with a stone hammer. However, the random nature of these scars show that the Indian worker, with his stone hammer, lacked the finesse of the experienced blacksmith using a smooth-faced metal hammer.) The size and depth of the scars indicate that the iron was first softened by heating and then a stone anvil and hammerstone used to pound the metal to the desired thinness or thickness. Heating *(made the metal easier to work)* ~~(metal facilitates forming)~~ (and it would also prevent the stone hammer from fracturing.) Some of the pieces were probably parts of barrel hoops, or thin strapping, and would need no thinning but could be formed into arrowpoints by merely using a stone chisel and a suitable percussor. However, one metal point bears scars which are smooth and cleancut - similar to those left by the common cold chisel - indicating that a metal chisel was used to form the stem.

Several of the metal artifacts were abandoned during various stages of manufacture, *for reasons that are not clear* some only requiring a minimum of work to make a useful tool. This may have been because the Indian was unskilled in metal work and simply gave up, or because he finally decided that his stone tools were superior.

Other metal artifacts found at the site were: (1) a broken knife-like object with a long tang, (6.1 centimeters) probably designed to be inserted into a handle; (2) a piece of metal (14.2 centimeters), discarded before completion, was apparently being thinned by a process of heating and drawing with the worker using an anvil stone and hammerstone. (Fig. <sup>Upper</sup> 3) (3) a small punch like object (4.3 centimeters) formed by pounding the lateral margins.

Four completed projectile points were found, each with variable form and outline. One (of the points) (5.5 centimeters) has an incurvate tip, probably the result of <sup>use</sup> ~~function~~. Another has the stem broken off (3.5 centimeters), and the <sup>remains</sup> other two are ~~completed and perfect~~ <sup>subsequent (Fig 2)</sup>

points - probably lost by the Indian.) One of the finished points indicates that the metal was laminated and then rubbed, or ground, for final shaping and forming.

Also found were bangles in various stages of fabrication, the manufacturing scars indicating that they were being worked with stone tools. History records the Indian as knotting bangles to the fringe of his buckskin clothing as both a decoration and for the enjoyment of the tinkling sound given off from the body movement. <sup>(Fig 3, Lower)</sup> One of the bangles is questionable, for it could well be a conical arrowpoint and not a bangle at all. Today, the modern archer uses a conical point for target practice and this so-called bangle resembles very much the modern day conical arrowpoint.)

Apparently, then, around one hundred years ago, small bands of roving Indians <sup>gleaned</sup> ~~were~~ gleaning any useable material abandoned by the pioneers on their Westward journey and converting the metal into points and cutting implements. <sup>for the Indian</sup> This site is important in that it records the history of the Indian converting from stone to metal tools, but using stone as the working media. The change from stone to metal points occurred in a relatively short period of time and this site might be said to be one of the records of "the beginning of the end" of the great Stone Age. For the Indian, the metal point was an improvement. Not because it was sharper - for, indeed, it required more sharpening - but because he could recover, straighten and re-use the same point. An analogy might be the white man's change from the Sharps single-shot rifle to the repeating Winchester.

It is interesting to note that here we have the Indian using stone to make metal points while in Point Barrow, Alaska, the aborigine went to great effort to fashion ivory flakers with metal tips to manufacture stone tools. (William Irving, Nat'l Museum, Canada, Personal communication, 1967)

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