

# MONTANA ROCK ART MOTIFS: HANDPRINTS

by

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## INTRODUCTION

Hand portrayals are a worldwide rock art motif, but relatively few articles are devoted exclusively to them. Like other motifs, handprints can provide information on site function and age, but in addition, because many pictograph hands are a physical representation of the painter, they can also provide personal information about the painters themselves. The purpose of this paper is to discuss the current knowledge about hand portrayals in Montana. In this discussion we are only concerned with hands as discrete individual figures and not as attached to the ends of arms on anthropomorphs. Because currently handprints in the Smith River drainage sites of central Montana have been recorded and analyzed in more detail than elsewhere in the state, information from those sites is presented for specific examples.

## OCCURRENCE AND DISTRIBUTION

Of the 680+ rock art sites recorded statewide, handprints are reported from only 66 sites. From an intuitive perspective it has long been recognized that there are more handprints recorded in central Montana sites than in surrounding areas, and our site count confirms that of the 66 sites with hands, 50 are in central Montana (Figure 1). Four hundred individual hands have been inventoried statewide, and over 300 of these are in the central counties, with 57 others just barely into what would be considered southeastern Montana, suggesting handprints are decidedly the motif of the central part of the state. Although the numbers may change with additional survey and recording, it seems unlikely that the distributional pattern, with the heavy concentration in central Montana, will change appreciably since the number of rock art sites recorded in this area is not unduly high compared with other parts of the state.

In spite of the large concentration of hands in this area, even in central Montana this is not a common motif. In the Smith River drainage, for example, handprints occur in 20 of 68 known pictograph sites. Although these sites contain 122 handprints, these hands constitute only 7% of the figures recorded in the drainage. Fingerlines, smears, geometric figures, and anthropomorphs outnumber handprints. However, handprints project a prominence and appear more numerous than they actually are in this area because multiple prints usually occur at a site and handprints are the exclusive motif at four sites.

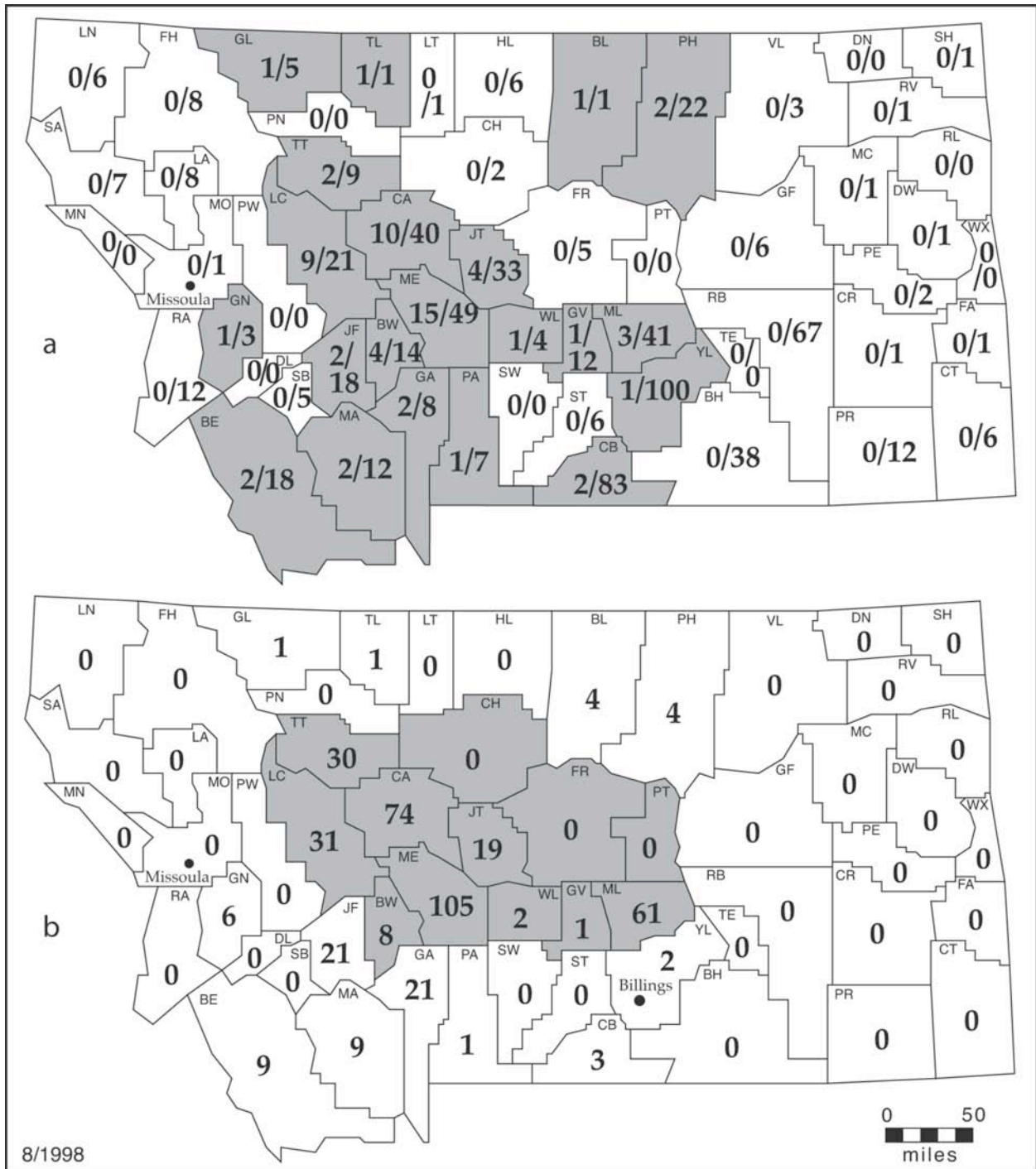
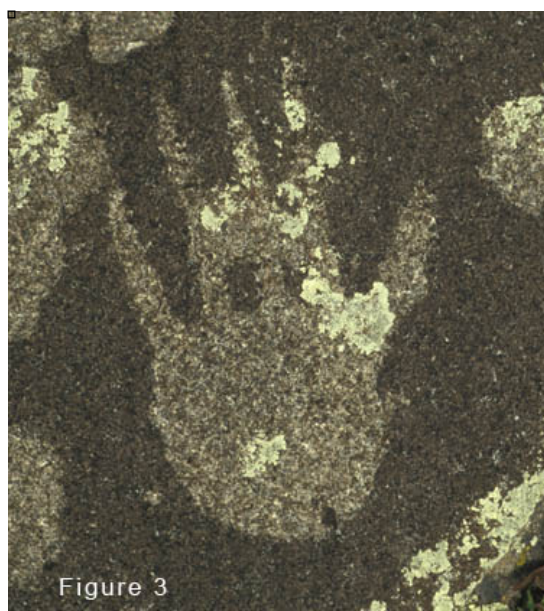
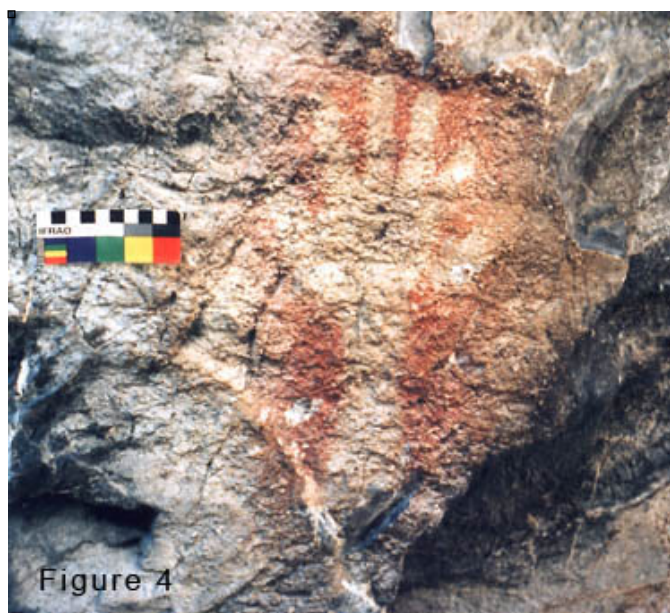


Figure 1. Distribution of Montana handprints by county. (a) Number of sites. First number is sites with handprints; second number is total number of recorded rock art sites. Counties with handprint sites are shaded. (b) Counts of individual handprints; central Montana counties are shaded.

## CATEGORIES OF HANDPRINTS



Categorization of handprints is necessary for organization and comparison of the motif. For this project we are concerned with three categories that are based on production of the figure. Actual hands impressed on the rock are referred to as impressions or positive handprints (Figure 2). A representation of a hand in either pictograph or petroglyph media is referred to as a stylized hand (Figure 3). Negative hands, whereby the hand was placed on the rock and painted around, in a stencil format is the third category (Figure 4). Negative hands are an outline of an actual hand but not necessarily an identical replica, as the hand can be portrayed differently by simply bending a finger. Another kind of hand seen in Montana rock art, though not as frequently as in the southwest, is the depiction of six digits or polydactyly. Although the three examples we have seen of six-digit hands in Montana could be included with stylized hands because they do not appear to be impressions, it is possible for actual hand impressions of this kind to exist since it is a biological occurrence and has been reported in American Indian populations.



Right and left hands can be identified for all categories if the palm is at least partially visible and either the finger arrangement or the thumb can be seen. However, there are many hands for which right or left cannot be determined.



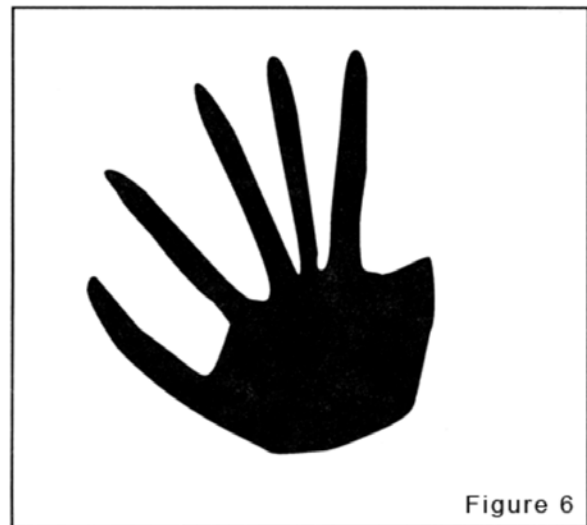
The majority of recorded Montana handprints (87%) are impressions. 13% are stylized, and to date, there has only been one negative hand noted. The negative hand is in the southwestern part of the state, an area where the rock art more closely resembles that in Idaho, where there are several examples of negative hands.

Hand impressions were made by placing the palm-side of the hand in paint and then pressing the hand against the rock. Impressions often leave gaps, particularly along the fingers or in the area of the palm. In some cases, such as seen in Figure 1, the impressed hand was apparently retouched to fill in the gaps and make it stand out more clearly. This can be seen here where paint of the same color and kind was applied with the fingers to make the hand as solid as possible.



Stylized hands are recognized by the presence of at least a palm and some fingers. Hands that were painted instead of impressed or are petroglyphs do not usually conform to the size and proportions of actual hands. In the Smith River drainage stylized hands are generally larger than reality, but stylized hands vary in size and shape. The stylized hand shown in Figure 5 has long straight lines for fingers and a small outlined palm. Although the fingers are all the same length, the short thumb indicates this is a right hand. A stylized hand the size of an adult occurs at 24GA301, Lower Blacktail Mountain Cave (Figure 6). All digits come together in a point near the center of the palm. Stylized hands, and feet for that matter, are occasionally confused with bear paws, and Figure 6 is one example. Sometimes the figure cannot be conclusively assigned to one identification or the other. There are four examples of hand-paw confusion in Montana.

The majority of hands identifiable as to left or right hand, regardless of their manner of application, are right. Statewide, 146 prints have been identified as right and only 55 as left. Among hand impressions of the Smith River drainage, two-thirds are right hands, and one-third are left hands, and the same breakdown is found among stylized hands. However, handedness can no longer be determined for half the hands in the Smith River area.



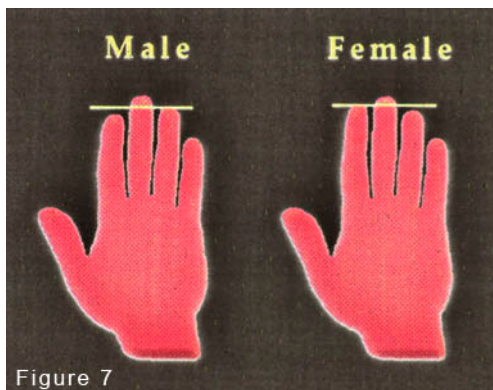
## HANDPRINT SITES

The only sites that contain only handprints and no other figures have been recorded in the Smith River drainage. Swamp Cave (24ME366), on a Smith tributary, has 25 handprints. Both impressions and stylized hands were placed on faces of the upper ledges in the cave.

The Rock Creek Handprint site (24ME363) is at the base of a bluff and has seven handprints, which are in a small V-shaped alcove on one end of the bluff. There are 19 hands at Handprint Bluff (24ME133), which rises from the Smith River, in five rows. Sheep Wagon Handprints (24ME372) also overlook the Smith River. Like Handprint Bluff, the handprints are unreachable from the ground today. They are in an alcove-like area approximately 15 feet above the present ground level. Nine handprints are here.

## IDENTITY OF THE PAINTERS

Eighty percent of the 122 handprints in the Smith River drainage are impressions, and they occur in 15 sites. These impressions have the potential to tell us about the age and sex of the painter. In the Smith drainage all hand impressions are in the size range of adult hands (about 15 to 20 cm in length from the bottom of the palm to the finger tips). These prints make only a generalized age division separating older juveniles and adults from young children. Therefore, from this information it is unlikely that anyone under the age of about 12 made any of the hand impressions in this study area. Of all the handprints recorded in Montana, only two, both in the central part of the state, are smaller than adult hands, and they are not in good condition.



Gender can be suggested based on finger length. Statistically the hands of women have longer index fingers than ring fingers, and the hands of men have longer ring fingers than index fingers (Figure 7). The gender-predicting method was attempted for all clearly visible hand impressions (positive prints) with complete fingers in the Smith River drainage. 16 of the 99 impressions fit these qualifications. Although this appeared to be an easy analysis method, its employment in rock art has several problems. The main problems encountered, especially when the hand is on the wall in a splayed or crooked manner, include:

(1) smudging of paint at the top of the palm or the failure to fill in that area with paint making identification of the base of the fingers difficult to impossible, and (2) loss of the finger tips in the application process. Both of these problems are critical since the difference in length between fingers is only a few millimeters, and these are easily lost with these painting problems. Therefore, although measurements were thought to be a good way of determining length differences, in reality this did not work well by itself. A better method was measurements combined with a visual comparison between the painted hand and a real hand held next to the painting as this made the contrast more readily apparent (Figure 8). Although this sexing method has problems that need to be resolved to improve its application to rock art, it is the best indicator of gender available to us at this time.





Based on a combination of measurements and comparisons, gender was predicted for ten hands in the Smith River area. These appear to reflect the male characteristic of longer ring finger than index finger. Although the hands for which gender could be predicted with this analysis shows hand impressions were made by men, this does not confirm that men painted all the pictographs in the Smith River drainage. However, it does lend support to gender indications that may have been suggested by other lines of evidence, such as associated figures or overall panel scenes. For example, the handprints placed over this bear with an associated baby, at the Whitetail Bear site (24JT605), have been thought to be associated with female fertility rites. The size and finger length of the handprints suggest they were made by adult females as shown in a comparison photo (Figure 9).

## FUNCTIONS OF HANDPRINTS IN MONTANA

Explanations for handprints range from secular signatures to ceremonial abstractions. The locational context of handprints is especially important to their functional explanation. In the Smith River area, handprints, unlike anthropomorphs and zoomorphs, occur most frequently on bluff faces. 75 of the 122 hands are on bluffs as opposed to only 30 hands in rockshelters and 17 in caves. The majority of all impressions occur on bluffs, while the majority of all stylized hands occur in rockshelters.

Within the Smith River drainage, hands are less frequently associated with ceremonial caves than they are with open bluff marker sites. When hands occur in ceremonial sites, they are more frequently stylized, and when in marker sites they are usually impressions. Hands occur in sites of different functions and were apparently used for several purposes in this area.

## AGES OF HANDPRINTS IN MONTANA

Dating of handprints in central Montana has been done with superposition and seriation studies, which indicate that paint kinds and colors are temporally the most consistent and sensitive attributes for chronological change in that area (Greer 1995). Through seriation a relative time scale for Smith River drainage pictographs was developed based on a combination of superpositioning and cross-dating of other figures. This information was plugged into an Occurrence Seriation analysis that included hand impressions (Figure 10). Hands formed a continuous distribution, overlapping with fingerlines on the early end of the graph and dating at least as early as the Middle Archaic, and overlapping with bears on the later end of the graph, with handprints probably ending about 1400 AD. Although only impressions (positive prints) were used in the seriation analysis, all impressed and stylized hands are only made of orange or medium to light red liquid paints, and superpositioning indicates these are early colors in the drainage. Although the chronology has not been analyzed for any other parts of the state, it is expected that handprints were no longer a prominent rock art motif by the middle of the Late Prehistoric period.



