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DgPf-18: Handprint rock art at the Sandstone Ranch site, North Milk River

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ABSTRACT

In 2017, Archaeological Survey staff investigated claims of rock art being present on a sandstone outcrop located at Sandstone Ranch, lands owned and managed jointly by the Nature of Conservancy of Canada, the Alberta Conservation Association, and the Alberta Fish and Game Association. Sandstone Ranch is situated within the Milk River Ridge Natural Area, encompassing native grasslands that support livestock grazing and a wide diversity of wildlife along the Milk River in southern Alberta. A preliminary visit to the outcrop resulted in the identification of a couple of red ochre handprints and smears. The rock art was identified as Foothills Abstract Tradition rock art. This paper discusses the significance of this newly identified rock art and how it relates to the distribution of other red ochre handprints and smears in Plains rock art.

KEYWORDS

Rock art, Foothills Abstract Tradition, Northern Plains, North Milk River

"Few if any manifestations of prehistoric human behaviour rouse the interest and imagination of modern society as much as prehistoric rock art" (Brink 1981).

1. Introduction

As noted in Thelma Habgood's 1967 paper on rock art in Alberta, the relative absence of handprints in Alberta rock art is notable, given its occurrence in the surrounding regions. Those handprint rock art sites that do occur tend to be clustered along the Foothills and Eastern Slopes of Alberta. As such the presence of handprints identified here as belonging to the Foothills Abstract Tradition rock art, located along the North Milk River in the southern boundary of the province, is significant.

The Sandstone Ranch rock art panel, DgPf-18, is located on the north side of the North Milk River in southwestern Alberta (Figure 1). At this locale, the river meanders within a flat valley bottom surrounded on both sides by high uplands that are cut by numerous deeply incised secondary drainage channels that have created badlands topography (Figure 2). The rock art was identified on a rather spectacular hoodoo that is situated on a sloping south-facing terrace just east of the confluence of a well incised tributary with the North Milk River (Figure 3).

There are relatively few known archaeological sites nearby, despite the location along very high archaeological potential terrain associated with the North Milk River valley (Figure 4). The paucity of sites may reflect the limited amount of archaeological survey conducted in the immediate area, which is largely constrained by pre-impact historic resource investigations of industrial footprints. To provide context, DgPf-18 is located about five kilometres northeast of the designated Provincial Historic Resource site, the Hoyt Tipi Ring Site, a large prehistoric campsite/ stone feature site composed of at least 176 stone circles,



Figure 1. Location of archaeological site DgPf-18 in southern Alberta.

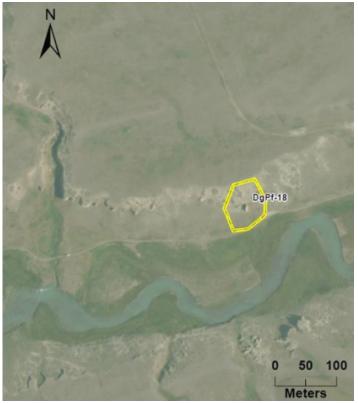


Figure 2. Aerial view of DgPf-18 and meandering North Milk River.



Figure 3. Hoodoo, or remnant sandstone pillar, facing southwest towards North Milk River. The person is facing the rock art panel near the base of the hoodoo.

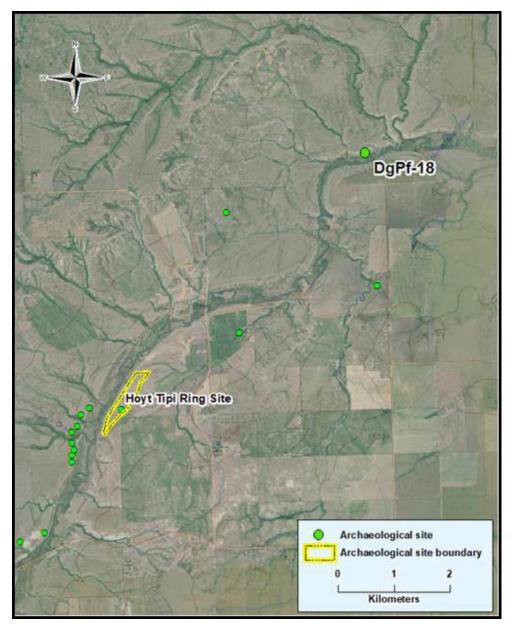


Figure 4. The location of archaeological site DgPf-18 relative to nearby previously recorded sites along the North Milk River.

25 stone arcs/partial rings, and four stone cairns situated on a high relict terrace above and east of the North Milk River. Writing-on-Stone, the largest rock art site in Alberta, is located over 80 kilometres to the east.

2. DgPf-18: Handprint rock art panel

The rock art panel is on a flat, west-facing sandstone exposure near the base of a hoodoo in the North Milk River Valley. The panel is quite high on the hoodoo, about 2.5 metres above current ground access. The panel height indicates that the art is of some antiquity, with erosion accounting for its height, or that some form of assisted access was needed to reach the larger-than-life height, or both (Figure 5). The rock art itself is faint, with the most obvious handprint in the middle of the flat face (when facing the panel). It represents a left hand with fingers and thumb spread; the hand is possibly tilted slightly to the right from vertical (i.e., high-five) position. A second, fainter handprint is visible about 15 centimetres lower down and 10 centimetres to the right of the main handprint. The fainter handprint is immediately adjacent to a cliff swallow nest and represents a right hand with fingers. As with the main handprint, the digits of the fainter handprint are all spread, with the hand in a near vertical position. The rock art images become much more apparent when viewed using digital imaging software such as DStretch (Figure 6).



Figure 5. The location of the handprint panel at DgPf-18 (circled in red). View facing east.



Figure 6. The DgPf-18 handprint rock art panel; the left handprint is just right of scale bar, the right handprint is just left of swallow nest. The photograph is augmented using DStretch digital enhancements.



Figure 7. The DgPf-18 handprint rock art panel; note ochre on lower 'panel' that may or may not be additional rock art (the possible rock art panel is circled in red). The photograph is augmented using DStretch digital enhancements.

Both handprints are partial. The main handprint exhibits, from left to right, the tip of the ring finger, the top half of the middle finger, all of the index finger but the tip, all of the thumb but the tip, and most of the palm. The fainter handprint exhibits, from left to right, the portion of the palm below the thumb, the tip of the middle finger, the top half of the ring finger, and the tip of the little finger. Although both handprints are fragmentary, they represent roughly the same portion of the hand; in addition, they both measure about 15 centimetres in maximum linear dimension. Taken together, an obvious interpretation is that the two prints - a left and right hand of roughly the same size side-by-side - represent an individual who applied ochre to both of their hands and placed them against the sandstone face together at one time.

3. DgPf-18: Possible additional images

As Greer and Greer (1999:64) have demonstrated for the state of Montana, most handprints found at Montana sites are directly associated with other kinds of rock art figures and scenes, or are located on nearby separate panels. Thus, there is the possibility that other images are present on the sand-stone hoodoo at DgPf-18, in addition to the two handprints described above, even though additional rock art imagery was not observed during the short field visit. Upon analyzing the imagery collected from DgPf-18 in the office, red ochre markings were observed on a lower more accessible 'panel' beneath the observed handprints, on a less flat portion of the pillar (Figure 7). This area is about two metres above the ground; thus, with some difficulty, the average person could

probably reach the panel from the ground. The lower panel exhibits ochre, but no obvious pattern(s) in the ochre are discernible. More decisive in-field observations of these lower ochre markings and other areas of the sandstone hoodoo are recommended to resolve the ambiguity around these ochre spots and identify any further rock art images at the site.

4. Handprints defined

Human handprints are portrayed in the rock art of all continents across the world (Anati 1993, 2004). A single reason for this phenomenon has not been efficaciously provided. In fact, there are likely multiple reasons across space and through time for people using handprints as subjects in rock art; as Anati (2004) has suggested, handprints likely served to relay information, representing symbols or ideas. Locally, research in Montana has suggested handprints in rock art come in a few basic forms:

- 1. Impressed hands that consist of an actual hand impression or print on the rock surface;
- 2. Stylized hands that consist of simulated pictographs or petroglyphs of a hand on the rock surface (but not an actual print);
- 3. Negative hands or hand stencils that represent an outline of an actual hand; and,
- 4. Finger lines that consist of fairly long individual lines, usually vertical but sometimes slightly slanted, created by using the finger pad dipped in liquid red paint (Greer and Greer 1999, 2021).

To this list of handprint types, Greer and Greer (1999, 2021) also add smears. Smears are the result of careful paint application to cover a small, usually mostly circular, area for the purpose of creating a pattern, such as a circular arrangement of individual smears; sometimes, but rarely, these are used as a background for another superimposed or scratched image (Greer and Greer 2021).

The basic descriptive nature of the handprint types used by the Greers mirror the language present in much of the Alberta rock art site literature and inventory (Keyser 1976; Brink 1981; Klassen 2003). A perusal of handprints and finger lines currently recorded in Alberta rock art has provided a context for interpreting the handprints at site DgPf-18. Smears appear to be an actual category of rock art, whose prevalence and importance has only been more recently recognized. The application of DStretch has assisted in the recognition of ochre smears on sandstone, particularly at Writing-On-Stone (Brink 2016). The utilization of DStretch on photographs will be discussed in this paper to provide context to handprints and finger lines; however, a more in-depth treatment of smears will need to await further investigation.

5. Handprints in Alberta rock art

Although handprints and finger smears have been long recognized in Alberta, discussion on them has lagged in the published archaeological record. Selwyn Dewdney recorded handprints at several Alberta rock art sites in the early 1960s, as can be seen in his sketches and tracings of the time. Although he does discuss ochre smears and their potential for ritual implications, handprints are not specifically discussed (Dewdney 1962). Likewise, Thelma Habgood identified numerous tally marks as potential finger smears or incomplete handprints at several sites in Alberta in her 1967 paper (Habgood 1967), but does not take the discussion further. In 1980, Jack Brink and Paul Donahue recorded a simulated handprint at the Cline River site, FaQf-1 (Brink 1981). Brink (1981) reported the site along with 15 other rock art sites in his seminal 'Rock Art Sites in Alberta: Retrospect and Prospect.' This report was the first published record of a handprint in rock art in Alberta. At FaQf-1, pictographs were identified on the south-facing side of a large boulder on the edge of a level terrace above Cataract Creek, a tributary of the Cline River, located about 130 kilometres west of Rocky Mountain House, within the Rocky Mountains. The rock art consists of an extensive group of parallel tally marks, a human figure, possible zoomorphs, simulated handprints, and abstract designs.

A review of the Archaeological Survey of Alberta Site Inventory records indicates there are 242 rock art sites in Alberta, as of 2022. Of these rock art sites, seven are handprint sites, seven are finger line sites, and ten are ochre smear sites (see Table 1 and Figure 8). Thus, a total of fourteen sites with handprints or finger lines account for about 5.8% of the rock art sites. Comparatively, the Greers' study noted that handprints account for about 10% of rock art sites in Montana.

The rock art sites in Alberta that exhibit handprints include Writing-on-Stone (DgOv-2, Panel 21 Face B and E), Sandstone Ranch (DgPf-18, this paper), Racehorse Creek (DlOp-63), Pine Coulee (EbPk-6/EbPk-43), Rat's Nest Cave (EgPt-33), and Grassi Lake Shelter (EgPu-5). The Sandstone Ranch handprint rock art images, of course, are positive handprints at the base of a sandstone hoodoo in an incised river valley (this article). The Rat's Nest Cave handprint rock art images consist of positive handprints on the face of rock under an overhang outside the mouth of the cave. There are three or four positive handprints with some smears around them, all in red ochre (Site Inventory Form - EgPt-33). The Grassi Lake Shelter handprint rock art image consists of an undisclosed number of positive handprints in a shelter and on a cliff-face located at the base of a steep cliff in a deep canyon; ochre smears were also noted on the nearby cliff faces (Site Inventory Form - EgPu-5). The Racehorse handprint rock art images consist of seven or eight handprints, possibly with forearms, and some smears on the face of a large conglomerate boulder (Site Inventory Form - DlOp-63). Writing-on-Stone handprint rock art images occur on a couple of faces within DgOv-2 Panel 21. Face B consists of at least three or more handprints, the most obvious of which are adult sized and include a full palm and four fingers; also included is a smaller painted simulated handprint (Figure 9). DgOv-2 Panel 21 Face E consists of three handprints and several finger lines (Figure 10) (Turney et al. 2021). At least one of the handprints is a full palm with the bases of four fingers, while the other handprints are more partial. Finger lines/swipes, and red ochre smearing are also present.

The rock art sites in Alberta that exhibit stylized handprints (depictions of hands, rather than positive or negative prints of actual human handprints) include Writing-on-stone (DgOv-2, Panel 19), Cline River (FaQf-1), and Spruce Meadows Erratic (EfPm-161). At Writing-on-Stone, the stylized handprint consists of a unique incised right handprint with a thumb, four fingers, a palm [with 'life-lines'(?)], and possibly part of the wrist or forearm (Site Inventory Form - DgOv-2, Panel 19) (Figure 11). The Cline River stylized handprint consists of a single handprint on the south-facing side of a large boulder on the edge of a level terrace above a tributary creek of the Cline River (Figure 12). The stylized handprint exhibits thick, straight fingers all the same length

Borden	Description	Image
DgOv-2, Panel 19	Simulated hand (Site Inventory Form - DgOv-2, P19, Woodman 2015)	Handprint
DiPi-42	Some parts of the large boulder were smeared with ochre, leaving red areas but no identifiable design (Site Inventory Form - DiPi-42, Giering 2015)	Smear
DjPf-18	Isolated sandstone outcrop with hand print (Site Inventory Form - DjPf-18, Hudecek-Cuffe 2017)	Handprint
DjPo-194	Appears to be a classic vision quest site, located in a S-facing subalpine cave. The site consists of two small panels of pictographs, each with a series of short (6 to 8 cm long) red ochre finger smears in sets of three. (Site Inventory Form - DjPo-194, Klassen 1998)	Finger lines
DIPo-63	7-8 red ochre hand prints, some with forearms, and some red ochre smudges and blotches on the south face of the large conglomerate boulder. To the south and north of the boulder various smaller boulders appeared to form some sort of alignment (Site Inventory Form - DIPo-63, Brulotte 1982)	Handprints
EaPk-111	Places where people rubbed red ochre on the cliff are seen as faint smudges and occasional finger swipes (Site Inventory Form - EaPk-111, Amundsen-Meyer 2012)	Finger lines, smear
EaPk-61	Red ochre has been smeared over a large area between the two rocks, no doubt indicating that this was regarded as a sacred and powerful space (Site Inventory Form - EaPk-61, Klassen 1992)	Smear
EbPk-6, EbPk-43	Pair 2, red ochre hand print, enhanced (Site Inventory Form - EbPk-6, Klassen 1992)	Handprint
EbPl-2	Most pictographs blurred by erosion; in 2 cases these appear to be finger marks (4 lines roughly parallel to each other) (Site Inventory Form - EbPi-2, Klassen 1992)	Finger lines
EbPl-5	Two scatters of artifacts and a single ochre smear were recorded in a sandstone outcrop at this location (Site Inventory Form - EbPI-5, Amundsen-Meyer 2012)	Smear
EbPl-6	A single red ochre smear was observed on a split glacial erratic at this location (Site Inventory Form - EbPl-6, Amundsen-Meyer 2012)	Smear
EcPl-16	Finger smears of red ochre are common at Williams Coulee (Site Inventory Form - EcPl-16, Amundsen-Meyer 2012)	Finger lines
EePm-3	Large glacial erratic in field – split into two main parts. Petroglyphs are very faint most of the time. Large panel on west side needs water to bring it out (Site Inventory Form - EePm-3, Glenbow 1962); Very extensive pictographs and smears on a huge erratic (Site Inventory Form - EePm-3, Klassen 1992)	Smear
EfPm-161	Badly faded, about 4 or 5 finger-length vertical stripes in red ochre clearly emerge from a more amorphous splotch. The painted area is no larger than a small book (Site Inventory Form - EfPm-161, Forbis 1990)	Finger lines
EgPt-33	Hand prints (positive images) present outside cave mouth (Site Inventory Form - EgPt-33, Brink 2004)	Handprints
EgPu-5	Three rock shelters, one with partitions, pictographs are present on the walls of two partitions (imitation hand prints near the floor in one, with a wooden bench built into it) (A.L. Bryan); Extensive ochre smears and possible handprints (Site Inventory Form - EgPu-5, Klassen 1992)	Handprints, smears
EhPl-2	In a few places it is possible to see individual finger swipes and hand prints left when people applied red ochre (Site Inventory Form - EhPl-2, Klassen 1992)	Finger swipes, smear
EhPo-84	One major set of approximately 40 tally marks and one set of three probable tally marks on southeast-facing sandstone outcrops. (Site Inventory Form - EhPo-84, Magne, Ronaghan, Light); A number of distinct, deep and wide vertical grooves, plus an odd star shaped element, and an ochre smear (Site Inventory Form - EhPo-84, Klassen 1992)	Smear
EiPl-19	Collapsed sandstone cave with series of red ochre shield-bearing anthropomorphous and V-bodied anthropomorphous, extensive ochre smears. No visible vandalism, extensive salt efflorescence damage (Site Inventory Form - EiPl-19, Magne 1992)	Smear
EiPn-1	Rock art found at the Madden site includes smears of red ochre, finger swipes, and a number of recognizable figures (Site Inventory Form - EiPn-1, Klassen 1992)	Finger lines
FaQf-1	Handprints are generally small by modern standards and could indicate the painting was done by a young person (Site Inventory Form - FaQf-1, Brink 1980)	Handprint

extending from an oval palm; the likeness is roughly life-like in size and may be either a touched-up impressed handprint or a stylized or simulated handprint. The Spruce Meadows Erratic also appears to have a stylized hand with five obvious fingers (Figure 13) (Site Inventory Form - EfPm-161).

The rock art sites in Alberta that exhibit finger lines or finger smears include Bluff Mountain (DjPo-194), Jenkin's Bison Jump (EaPk-111/38), Nanton Jump (EbPl-2), Williams's Coulee (EcPl-16), Spruce Meadows Erratic (EfPm-161), Airdrie Erratic (EhPl-2), and Madden Buffalo Jump (EiPn-1). Bluff Mountain finger line rock art images consist of a series of short (six to eight centimetres long) red ochre finger smears in sets of three located at the mouth of a small cave at the base of a steep cliff, high on Bluff Mountain (Site Inventory Form - DjPo-194). The Jenkin's Buffalo Jump finger line rock art images consist of numerous finger lines on a sandstone face below a long, low, raised plateau that creates a sandstone bluff (Figure 14) (Site Inventory Form - EaPk-111). The Nanton Jump (EbPl-2) is a sandstone cliff on the west side of a glacial valley on the eastern edge of the foothills; the rock art is situated on the sandstone of the jump itself. The image consists of a number of handprints and smears in red ochre (Site Inventory Form - EbPl-2). The William's Coulee (EcPl-16) finger line rock art images consist of numerous individual sets of finger lines from single

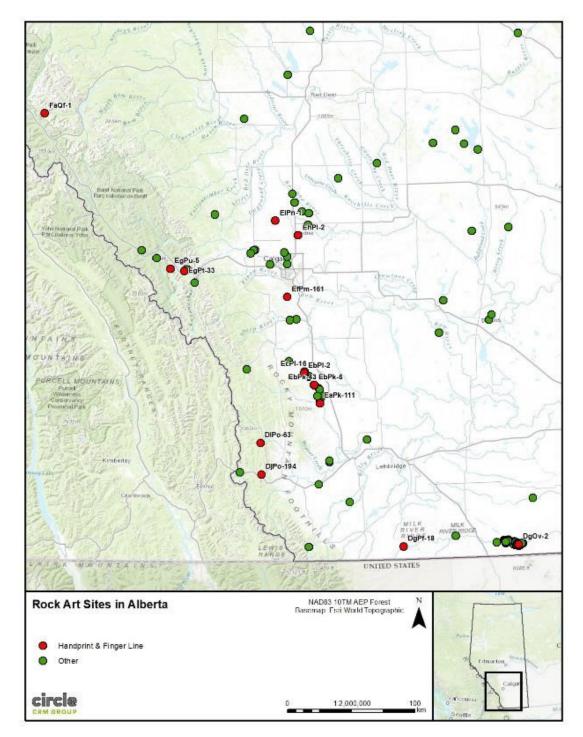


Figure 8. Map showing the location of all known rock art sites in Alberta exhibiting handprints and finger lines. Note the generalized restriction of these sites to the west of Hwy 2 in the foothills and mountains.

hands (Figure 15). These are located near the top of a steep talus slope/cliff with a layer of exposed sandstone bedrock at the top creating overhangs for the rock art (Site Inventory Form - EcPl-16); this site is located on a small erratic situated on a local high point. The Airdrie Erratic (Dewdney 1962; Habgood 1967; Brink 2018a) consists of numerous finger lines emerging, or merging down into, a large smear

or smears, on a large erratic set in a shallow depression in rolling terrain (Figure 16) (Site Inventory Form - EhPl-2). Interestingly, the Madden Jump rock art images (Dewdney 1962; Habgood 1967; Keyser and Klassen 2001) consist of both finger line and handprints on a high cliff face part way down the side of a deep, wide coulee on an isolated sandstone outcrop (Site Inventory Form - EiPn-1).

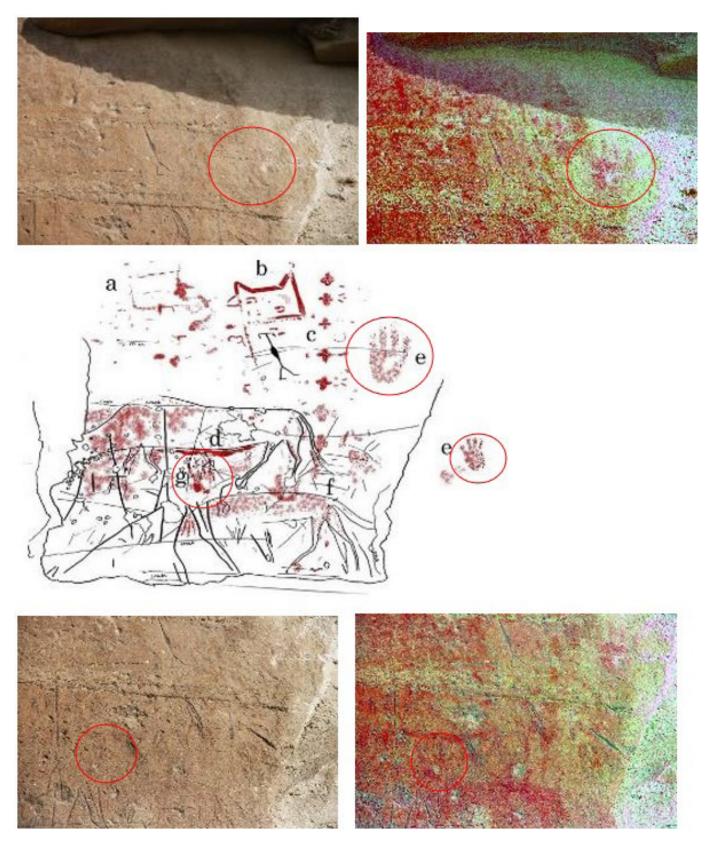


Figure 9. Writing-on-Stone DgOv-2 Panel 21 Face B showing three handprints (circled in red) (images courtesy of Michael Turney, Lifeways of Canada Ltd., Landon Bendiak, Golder Associates, and Jack Brink).

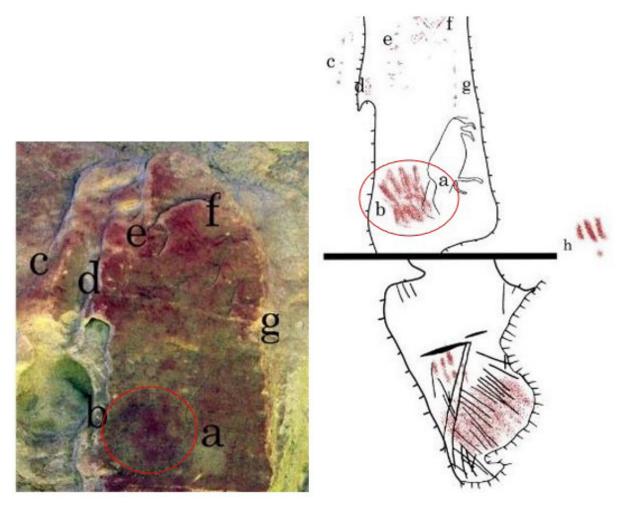


Figure 10. Writing-on-Stone Panel DgOv-2, Panel 21 Face E showing three handprints/finger lines (images courtesy of Michael Turney, Lifeways of Canada Ltd., Landon Bendiak, Golder Associates, and Jack Brink).

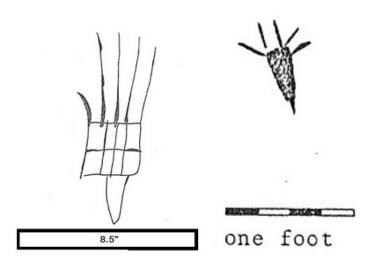


Figure 11. Writing-on -Stone (DgOv-2, Panel 19) illustrating a stylized handprint (images courtesy of Jim Keyser).



Figure 12. Cline River (FaQf-1) illustrating stylized handprint (photograph courtesy of Karen Giering).



Figure 13. EfPm-161 showing possible stylized handprint, on right.

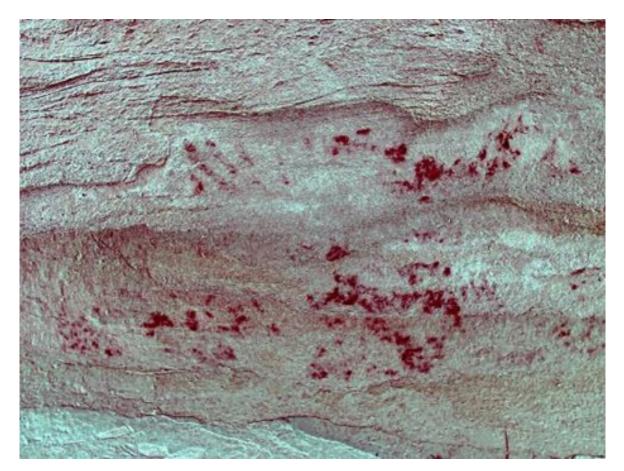


Figure 14. Jenkin's Buffalo Jump (EaPk-111/EaPk-38) with finger swipes on sandstone overhang (photograph courtesy of Lindsay Amundsen-Meyer).

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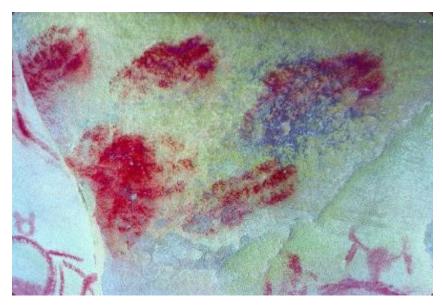


Figure 15. William's Coulee (EcP-16) finger lines above shield-bearing warriors (photograph courtesy of Karen Giering).



Figure 16. Airdrie Erratic (EhPl-2) showing finger swipes below possible zoomorph (photograph courtesy of Karen Giering).

6. Discussion

The context of the handprints and finger lines observed in Alberta sites appears to be consistent with what is observed at numerous rock art sites in Montana, where isolated handprints or handprints associated with geometrics and abstract, but highly stylized zoomorphs and anthropomorphs, have been identified as belonging to the Foothills Abstract Tradition rock art.

This rock art tradition has been well documented in Alberta and Montana (Malouf 1961; Keyser 1977, 1979, 1990; Greer and Greer 1994, 1995, 1996; Greer 1995, Klassen 1995, 2003; Keyser and Klassen 2001). Mostly located in west-central Montana along the Eastern Slopes of the Rocky Mountains - in fact, this is where the rock art tradition was initially defined (Keyser 1977, 1979, 1990) - it has also been reported in Alberta, Wyoming, and British Columbia (Figure 17). Although a few sites have been reported west of the continental divide, Foothills Abstract Tradition rock art sites are most frequently located in the transition zone between the Foothills and the High Plains of central Montana, in a number of environmental settings including rolling plains, at buffalo jumps, on sandstone cliffs, and on glacial erratics.

This rock art tradition is defined by a few distinct rock art elements, particularly the stylized and abstract depictions of animals and humans. These elements are often accompanied by handprints, finger smears, finger lines, and red ochre wall paintings (Keyser 1977, 1979, 1990; Keyser and Klassen 2001; Keyser and Lycett 2021). Both actual handprints (positive and stencils) and simulated painted handprints occur. Most commonly the handprints are just that, a hand has been coated in ochre paint and then pressed into the rock surface leaving a positive hand impression. However, both stenciled hands and paintings of hands also occur. The handprints can occur singly or in groups and are highly variable in completeness sometimes grading into finger lines/smears, or only including palm prints. Likewise, simulated painted handprints are also variable in representation, often being larger than life, including extra digits, or transitioning to bear paw or bear claw motifs.

A second common element of the Foothills Abstract Tradition rock art are large ochre smears. These occur at Foothills Abstract Tradition sites in a great enough frequency to indicate some intentionality beyond the hand and brush cleaning activities associated with rock art creation. Ochre smears are particularly common in the northern distribution of Foothills Abstract Tradition rock art sites, and often the smears are superimposed by handprints, finger lines, and other motifs forming an almost incomprehensible palimpsest. In addition, the rock art tradition also includes a number of other representational and non-representational elements. Keyser and Klassen (2001) have identified six other motif categories within the Foothill Abstract Tradition; these include human/ anthropomorphs, animal/zoomorphs, masks, mazes, finger lines or finger smears, and geometric abstracts. It should be noted that although anthropomorphs and zoomorphs occur, it is at a much-reduced frequency compared with Columbia Plateau Tradition rock art.

The presence of handprints, finger lines, finger smears, and large panels of ochre smears coupled with the absence of the more typical hallmarks of Ceremonial and Biographic Tradition or Columbia Plateau Tradition rock art clearly suggests a Foothills Abstract Tradition authorship for the Sandstone Ranch (DgPf-18) rock art. If the identified rock art belonged to the Ceremonial Tradition of the Northwestern Plains Macro-tradition of rock art, one would expect the static and often isolated representation of shield-bearing warrior motifs, rectilinear, and v-necked bodied anthropomorphs, and boat-form animals (Keyser and Klassen 2001). Likewise, Biographic Tradition rock art often uses similar motifs to the Ceremonial Tradition but in a much more dynamic way producing narratives. This rock art tradition tends to be incised as petroglyphs (fewer pictographs), is more stylized or conventionalized, and focuses on material culture (Keyser and Klassen 2001). In contrast, in rock art identified as belonging to the Columbia Plateau Tradition along the periphery of the Northwestern Plains, one would expect simple stick figure anthropomporphs and animals, tally marks, and geometric figures in static arrangements (Keyser and Klassen 2001). However, the identification of the rock art authors remains unknown. Likewise, questions regarding its age and meaning remain.

Compared to some other rock art traditions identified for the Northern Plains and adjacent mountains, such as Vertical Series whose age is currently being re-examined (Greer and Greer 2003: Kaiser and Keyser 2019; Turney et al. 2021), the age of the Foothills Abstract Tradition is relatively secure (Keyser and Lycett 2021). Four Foothill Abstract Tradition rock art sites in Montana have been subject to radiocarbon dating (Scott et al. 2005). The results of this dating have resulted in the definition of a roughly 500-year span of time between 2000 and 1000 years ago in which these sites were created (Scott et al. 2005; Keyser and Lycett 2021).

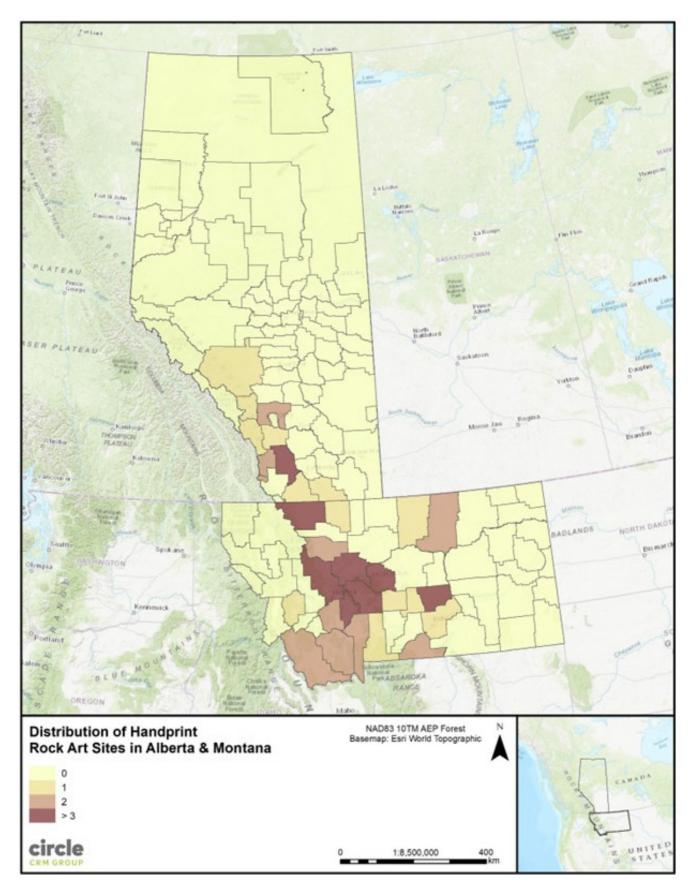


Figure 17. Map illustrating the frequency of handprint rock art sites by municipalities in Alberta and counties in Montana, showing a trend toward theses sites to be found in the Foothills and Rocky Mountains.

Furthermore, Keyser and Klassen (2001) have identified several other characteristics of the Foothills Abstract Tradition rock art and observations that assist in defining the temporal context for this tradition, including the following:

- The absence of historic markers such as guns, horses, and other trade goods suggest the Foothills Abstract Tradition predates the Historic Period;
- 2. The absence of classic Late Precontact Plains rock art traditions elements/motifs such as shield bearing warriors and V-neck figures suggest that Foothills Abstract Tradition rock art predates both Ceremonial or Biographic Tradition rock art;
- 3. The superimposition of later precontact rock art traditions, such as Plains Ceremonial or Columbia Plateau Traditions on top of Foothills Abstract Tradition rock art further corroborate its relative age (as predating both Ceremonial and Biographic Tradition rock art);
- 4. The apparent re-use of Foothills Abstract Tradition rock art sites by later Ceremonial and Columbia Plateau Traditions indicates the former is earlier than the latter;
- 5. Oral traditions of the Niitsitapi (Blackfoot) indicate that Foothills Abstract Tradition rock art was not created by them, thus suggesting it predates arrival of the Niitsitapi;
- 6. A seriation of over sixty Foothills Abstract Tradition rock art sites (Greer 1995) suggests a range of 1000 BC to AD 1000 for their creation; and,
- 7. The burial of a Foothills Abstract Tradition rock art panel by sediments containing Late Precontact artifacts, indicates an age predating the Late Precontact, further suggests Foothills Abstract tradition predates rock art traditions linked to the Late Precontact Period.

These multiple independent lines of reasoning ("cables") have led Kaiser and Keyser (2019) and Keyser and Lycett (2021), to suggest that the Foothills Abstract Tradition rock art spans the Late Archaic to the middle of the Late Precontact Periods, a period of time between ~2000 BC and AD 1000. The newly identified rock art at Sandstone Ranch (DgPf-18) should fit comfortably within this time range. Given the re-examination of the age of Vertical Series Tradition rock art and recognition of its antiquity (Greer and Greer 2003; Kaiser and Keyser 2019; Turney et al. 2021), the possible association/superimposition of the Foothills Abstract Tradition rock art, and the faded nature of many Foothills Abstract Tradition rock sites, there is much to support the Foothills Abstract Tradition rock art being of some antiquity.

Although there is no definitive answer as to the meaning or function of Foothills Abstract Tradition rock art, several researchers have made suggestions. All seem to agree that the handprints and wall painting ochre smears are suggestive of ceremonial or ritual activity (Greer 1995; Keyser and Klassen 2001; Klassen 2003). Klassen (2003) has gone further to suggest that larger more complex sites with multiple handprints and larger wall paintings/ochre smears may be physical evidence of larger rituals involving multiple people or locations with repeated use. In contrast, less complex sites with only one handprint or a few finger lines may represent more private rituals of a single or a very few people. Greer (1995) has also suggested that the more visible nature of the rock art sites (i.e., bluffs, exposed cliff faces, large glacial erratics) combined with the large size of the ochre smears/wall paintings were visual signals meant to be seen to designate territory or ritual space. At present it is difficult to say which if any of these suggestions are accurate.

Elements of Foothills Abstract Tradition Rock Art have been previously identified in Alberta at Bluff Mountain (DjPo-194), Race Horse Creek (DlPo-63), Glenwood Erratic (DiPi-42), Jenkins Buffalo Jump (EaPk-38), Split Rock (EaPk-61), Pine Coulee 1 and 2 (EbPk-43), Pekisko/Mystic Cave (EcPm-1), Okotoks/Big Rock (EePm-3), Spruce Meadows (EfPm-161), Grassi Lakes Shelter (EgPu-5), Airdrie Erratic (EhPl-2), and at Carstairs Coulee (EjPl-1) (see Fowler 1950; Leechman et al. 1956; Dewdney 1962; Habgood 1967; Brink 1981; Keyser and Klassen 2001; Klassen 2003; Brink 2018a, 2018b). These sites are usually found in the Foothills, including an arc site cluster between Calgary and Lethbridge, with some located along the Eastern Slopes and others located further out in the prairies (Klassen 2003).

Many of these sites include Vertical Series Tradition rock art, and the connection between Foothills Abstract and Vertical Series rock art traditions has been previously identified in the NW Plains Culture area (Kaiser and Keyser 2019) and, more specifically, in Alberta (Turney et al. 2021). Sites that contain both Vertical Series and Foothills Abstract Tradition rock art include: Glenwood Erratic (DiPi-42), Okotoks/Big Rock (EePm-3), Spruce Meadows (EfPm-161), Airdrie Erratic (EhPl-2), Carstairs (EjPl-1) and more recently identified DgOv-2 Panels 21 and 22 at Writing-on-Stone.

Most rock art identified in the Milk River valley has been assigned to the Plains Ceremonial and Biographic rock art traditions (Keyser 1976, 1977; Klassen 1995). The identification of Foothills Abstract Tradition rock art in the Milk River valley is therefore important. The Sandstone Ranch Site (DgPf-18) along with the previously mentioned Vertical Series and Foothills Abstract Tradition rock art site at DgOv-21 Panel 21/22 (Turney et al. 2021) help to establish the complexity and time depth of the rock art traditions in Southern Alberta.

7. Conclusion

As Jack Brink noted over forty years ago, rock art sites, like the Sandstone Ranch site, remain amongst the rarest and most priceless of all precontact sites in Alberta (Brink 1981:80). The special value in these rock art sites lies in their universal appeal, and their ability to provide information about precontact lifeways not normally available to archaeologists (Brink 1981:80). Perhaps most importantly, Jack's substantial contributions, not only to rock art research but to Northern Plains archaeology in general, remind us that the stuff of archaeology, including the handprint rock art images at Sandstone Ranch, represent items and paintings made by individuals – men and women and children – from long ago, giving us all a fragile but remarkable connection to the past.

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