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Spatial Patterns in Anthropomorphic Fremont Rock Imagery of Central Utah

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A thesis submitted to the faculty of
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ABSTRACT

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Rock imagery from the late Fremont period (1000-1300 AD) has captivated the interest of both professional and avocational researchers for the past century. In this thesis, I apply a highly systematized method of cataloguing and analysis to 482 anthropomorphs from Clear Creek Canyon (CCC) and Grand Staircase Escalante National Monument (GSENM). The primary theoretical assumption in this thesis is that the shapes used in anthropomorphic imagery convey ideas about how the Fremont saw people. I therefore recorded the head and body morphology and presence of arms, legs, and genitalia of each anthropomorph. By observing the data spatially, I discovered both intraregional and interregional patterns. This research served to strengthen the argument that the Fremont people shared a common culture with regional variations.

Keywords: anthropomorph, Clear Creek Canyon, Escalante, Fremont, Fremont Indian State Park, Native Americans, rock art, rock imagery, Southwest, spatial, Utah

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1 Introduction

Fremont rock imagery panels, with their striking anthropomorphic figures, are instantly recognizable to both Utahns and tourists alike (Figure 1.1). The figures have become so inextricably linked to the Fremont people that their presence, along with a suite of artifacts, is one of the defining characteristics of the Fremont cultural tradition (Janetski 2008; Searcy and Talbot 2016).

The Fremont people were an archaeological culture that lived across the modern-day state of Utah, portions of southern Idaho, eastern Nevada, and northwestern Colorado from approximately 100-1400 AD. They had a mixed economy of both hunting and gathering as well as farming, and it has been proposed that there were diachronic fluctuations in subsistence practices over time (Madsen and Simms 1998). Later occupations (post A.D. 800) clustered in small villages scattered across the region, but primarily in well-watered valleys at the frontiers of the northern Colorado Plateau and the eastern Great Basin. The Fremont are archaeologically defined by the presence of farming, pit houses, some stone masonry, grayware pottery, clay figurines, and distinctive petroglyphs and pictographs (Janetski 2008; Searcy and Talbot 2016; Simms 2023; Simms and Gohier 2010). This thesis focuses specifically on their rock imagery.

There have been a host of rock imagery projects completed to catalogue, analyze, and interpret these rock imagery figures. Professional archaeologists have conducted several surveys of Fremont rock imagery, from the Claflin-Emerson expedition (Morss 1931) to BYU's Office of

Public Archaeology (OPA) in the 90's (Brigham Young University 1992). Interpretations from native groups, such as the Paiute (Martineau 1985), as well as archaeologists are also present in the literature (Matheny et al. 2004). Likewise, avocational archaeologists have taken a strong

Figure 1.1. Panel 42SV1923.B23.

interest in understanding rock imagery, as evidenced by "people's forums" such as the Utah Rock Art Research Association's database Patina, where all members can submit "a variety of stories, remembrances, research papers, theories, photo essays, fine art, poetry, or whatever our members and rock imagery associates may want to share" (urara.wildapricot.org 2023).

The Need for Systematic Investigation into Fremont Rock Imagery

There is clearly a demand for information about rock imagery, but up to this point, researchers have not taken a systematic approach to collecting data that allows for ease of comparison between different projects. Such an approach is necessary to identify meaningful patterns in rock art which correlate with cultural variation between regions.

This thesis is the first application of a coding packet which was developed by Chris Watkins and refined with help from Maya Watkins and me. This standardized coding packet formalizes a shared vocabulary for all Fremont rock imagery studies. It is a part of the Fremont Rock Art Project (FRAP). The purpose of this project is to assemble anthropomorphic rock imagery studies from different places, institutions, and times to compare results, specifically about anthropomorph morphology. The coding system includes a comprehensive list of design elements that commonly appear on Fremont anthropomorphic rock imagery. Each design element (for example, head shape) can manifest as a variety of design forms (ex. Bucket, circle, rectangular, thumb heads, etc.) which are also defined by the coding packet.

I used the coding packet first to analyze all 405 anthropomorphs recorded at Clear Creek Canyon (CCC), Utah, and then to analyze the 77 anthropomorphs recorded at Grand Staircase-Escalante National Monument (GSENM). This thesis focuses specifically on head and body morphology and presence of arms, legs, and genitals. I then searched for regional trends at CCC as well as inter-regional trends between the two locations. The analysis consisted of coding each design element and creating plots of where each design form appeared in the two regions. I also performed a correspondence analysis between head and body shapes at CCC to see which design forms tended to appear together. By comparing the art from these two regions, I was able to see

how rock imagery differed across regions and to demonstrate the effectiveness of the coding packet in analyzing these differences.

This analysis has revealed patterns both in CCC and in GSENM. At both sites, there are slight differences in the east-west distribution of various head and body design forms. There are also a few stark patterns: for example, male genitalia at CCC tend to be found upstream, while female genitalia are found downstream.

Although patterns are discernable at a regional level, they are more distinct on an inter-regional scale. CCC and GSENM have distinct trends in the head shapes used, frequency of body shapes, and depiction of genitals. Most importantly, applying this comprehensive coding packet to future projects would allow for systematized comparison between regions, revealing trends across the Fremont region. Basic descriptive statistics of the GSENM and CCC reveal that the two sites were part of the same Fremont complex but had regional stylistic differences (Searcy and Talbot 2016; Talbot 2000). As more regions are analyzed using the Watkins coding packet, the data will continue to strengthen this argument.

The inability to control the chronology of rock art is the largest hurdle that research into rock imagery faces. Archaeologists have sought to date rock art through proximity to or shared artistic style with dated sites as well as technical methods such as optically stimulated luminescence dating (Pederson et al. 2014). Though useful methods, these often result in wide date ranges. Prehistory was not stagnant and therefore all rock images which appear in the same place cannot be decisively attributed to the same time period or same group of artists. The patterns addressed in this thesis represent artistic styles from many different generations of Fremont who occupied these areas. Because of this, my research cannot be seen as a direct

comparison of contemporary regional groups but rather a comparison of the cumulative artwork of the inhabitants of two regions over time.

In this thesis, I do not seek to refine the styles established by Polly Schaafsma (1971). I also do not attempt to interpret literal meanings of the images. However, after assembling my data, I explore some interpretations of the patterns using the theoretical perspectives of landscape archaeology and the archaeology of the body. These theoretical lenses inform my understanding of Fremont rock imagery.

By creating rock imagery, the Fremont manipulated their landscape in a way that made their ideological structures seem permanent (Potter 2004). Both special and mundane places on the landscape were marked with anthropomorphs imbued with meaning. As the next generation of Fremont people grew up surrounded by these rock symbols, they became a part of their social conditioning. In this case, the ideological structures communicated by the Fremont were ideas about the body. The body is not only an expression of social status but also the site of lived experience, where sensory experiences with the landscape become meaningful. Archaeologists have also looked particularly at artistic representations of the body as expressing norms or aspirations of the body (Joyce 2005).

Organization of Thesis

Chapter two presents background information on the Fremont people as well as a history of how their rock imagery has been investigated so far, with particular emphasis on Polly Schaafsma's 1971 book, *The Rock Art of Utah*. It also discusses the history of OPA's Clear Creek and Escalante projects, which are the source of most of my data. Chapter three expands upon the

theoretical underpinnings of this thesis. Chapter four discusses the methods used and my reasoning behind choosing these methods.

Chapter five is my results chapter, in which I display point plots and discuss the trends they display. I also show the results of the correspondence analysis I performed on CCC. In chapter six, I discuss the implications of the results of my analyses in the context of the current understanding of Fremont rock imagery styles and my chosen theoretical lenses. I also discuss future use and potential collaborations for this project. The chapters are followed by three appendices: the first of which is the coding packet, the second includes images of all the rock imagery photos, and the third contains the data tables generated during the image analysis.

2. Background

The Fremont Culture

The Fremont culture, like most archaeological cultures, is defined by a suite of lifestyle traits and crafts bound within a geographic area. The Fremont lived in the modern-day boundaries of Utah, portions of southern Idaho, eastern Nevada, and northwestern Colorado. This area encompasses parts of both the Great Basin and Colorado Plateau, covering a variety of environments including desert, mountainous terrain, and well-watered valleys such as the fertile area around Utah Lake. Many abandoned Fremont settlements were later developed by Mormon pioneers in the 19th century, as it was attractive land well-suited for irrigation and farming. Some of these sites include Provo (Janetski et. al 1983), Salt Lake City (Talbot et al. 2004), as well as major tourist attractions such as Capitol Reef National Park (Castleton 1978).

The Fremont region is situated north of the areas occupied by the Ancestral Puebloans (Figure 2.1). Similarities in their culture, combined with this proximity, led Alfred Kidder (1924) to describe the Fremont as a "Northern Peripheral District," implying that their culture had bled northward from the greater Southwest (Allison et al. 2019). A turning point in Fremont studies came when Noel Morss recognized the Fremont as a unique cultural group. During the 1928-1931 Claflin-Emerson expedition, Morss explored the Fremont region first-hand, which led him to develop one of the first definitions of this archaeological culture. For the purposes of this thesis,

it is important to understand these traits as both a manifestation of the Fremont and a window into their *Weltanschauung*, or world-view. Morss described The Fremont as follows:

> This [Fremont] culture was characterized by cave sites with slab cist architecture similar to that of the Basket-maker and Pueblo I periods; by a distinctive unpainted black or gray pottery; by the exclusive use of a unique type of moccasin; by a cult of unbaked clay figurines obviously related to, but more elaborate than Basket-maker III figurines; by abundant pictographs of distinctive types; and by a number of minor features which tend to identify it as a Southwestern culture on approximately a Basket-maker III level, but which showed consistently a degree of divergence from corresponding features of orthodox cultures [Morss 1931:xvii].

Morss's description notes the similarities with better-known pre-colonial Southwestern U.S. cultures while emphasizing the elements which are culturally distinct to the Fremont.

Scholars who research the Fremont today still include the production of clay figurines, grayware pottery, and distinctive rock petroglyphs and pictographs (Janetski 2008; Madsen 1989). Other studies have revealed a mixed subsistence strategy of farming maize, beans, and squash while simultaneously hunting and gathering. Archaeologists who study human behavior ecology have hypothesized that Fremont people periodically fluctuated between a sedentary farming lifestyle in pit houses and the relative instability of foraging and living in temporary structures (Madsen 1989, Madsen and Simms 1998, Simms 2008), although archaeologists who take a socially based approach to Fremont studies believe they were sedentary (Allison 2008; Talbot 2012). Janetski (1998) characterized the Fremont as "an aspect of the larger Southwestern farming pattern that bulged northward crossing the Colorado and Virgin Rivers,

endured for several centuries, and then pulled back." This definition characterizes the Fremont as active participants in a larger system.

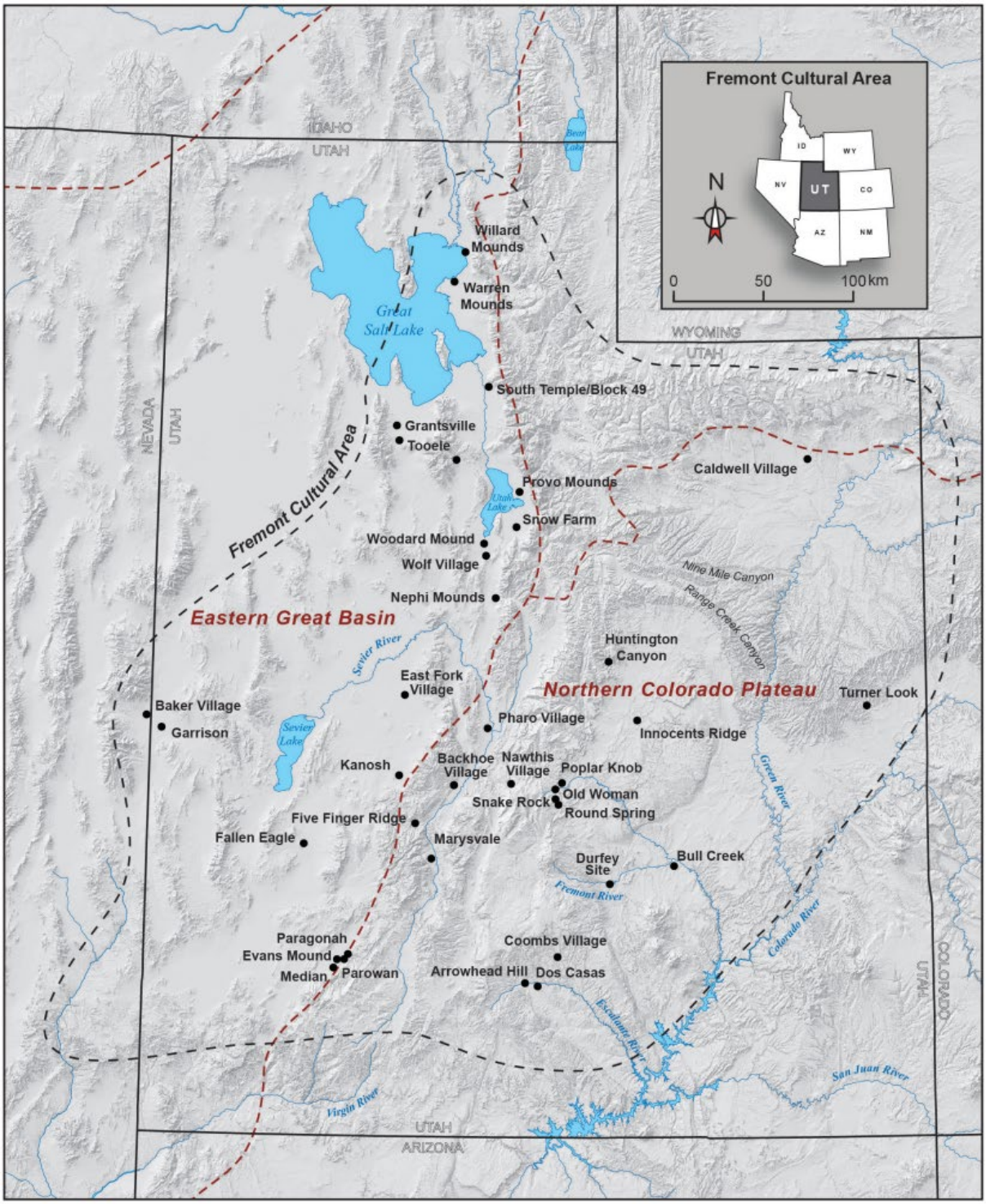

Figure 2.1. Map of the Fremont cultural region (Ure 2013:30).

Pictographs and petroglyphs are highly visible representations of the Fremont culture for both archaeologists, tourists, and locals alike. The following sections include a brief history of Fremont rock imagery studies, followed by a background of the Clear Creek Canyon (CCC) and Grand Staircase-Esclante National Monument (GSENM) regions.

Fremont Rock Imagery Research

The history of Fremont rock imagery research is characterized by four different types of research which are summarized here. The earliest type of research comprises reports from early 20th century expeditions. These laid the groundwork for later, more polished rock imagery studies. Second, the largest and most influential body of research was Polly Schaafsma's stylistic analysis of rock imagery across the Fremont region in the 1960s and 1970s. Third, I discuss reports, surveys, and interpretations of individual sites[1]. Finally, I discuss the current state of rock imagery studies, which includes many avocational publications and a hesitancy of professional archaeologists to make interpretations of petroglyphs and pictographs.

Early Expeditions

The Claflin-Emerson expedition (1928-1931) provided the most well-known early research that included the recording of Fremont rock imagery. The data generated from this expedition were extensive and were later used in Polly Schaafsma's influential work *The Rock Art of Utah* (1971).

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[1] Native Americans have also offered their own interpretation of Fremont rock art. For the purposes of this thesis, the only Native American work I address directly is LaVan Martineau's unpublished manuscript about the rock art of Clear Creek Canyon (1985).

After being introduced to the Northern Periphery area of Utah by archaeologist Alfred Kidder, William Claflin and Raymond Emerson decided to fund an expedition to the region. This Claflin-Emerson expedition was planned by Henry Roberts and Donald Scott of Harvard's Peabody Museum (Spangler and Aton 2018).

The goal of the trip was to gain on-the-ground knowledge about a largely unexplored area of Utah, including the Tavaputs Plateau, Boulder Mountains, Kaiparowits Plateau, and San Rafael desert. The group also visited Nine Mile canyon after hearing cowboys describe it as a "continuous picture gallery" (Spangler and Aton 2018). Donald Scott acted as photographer for the trip. He took hundreds of photographs of rock imagery, which were stored in the Harvard Peabody Museum and later contributed to classic studies of Fremont art (Morss 1931; Schaafsma 1971).

The rock imagery recording methods for the expedition were sporadic and variable. Rather than photographing a random sample of rock imagery, Scott photographed only panels that were highly impressive and/or easily accessible. Recording was slow and laborious, and because they traveled on horseback, the crew missed many sites—a common problem of the day. Participants recorded how at Middle Willow Creek, the expedition was getting bogged down recording every panel, so they gave up and traveled another 10 miles without taking a single note. The panel descriptions the crew wrote were also short and unenlightening by today's standards (Spangler and Aton 2018).

Despite these issues, the Claflin-Emerson expedition and especially the Scott collection of photographs have been exceptionally helpful in the study of Nine Mile Canyon's rock imagery and Fremont rock imagery in general. The data collected served as the basis for Morss's definition of the Fremont Complex in 1931 (Morss 1931). Morss did not classify or give names

to any of the types of rock imagery, but rather he provided summaries of the main motifs and described a few key panels. He briefly mentioned stylistic elements such as the elongation of human figures, cornute figures, pecking styles, gray and red paints, etc. that made up the style in the canyon. Morss compared the art to other regional indigenous art and deduced that it came from "a culture similar to, if not indistinguishable from, that of the Fremont valley" (Morss 1931:41).

In 1929, Julian Steward was the first to track the appearance of specific rock imagery motifs. He did not define styles, but his was the first effort to make sense of the wide-spread distribution of rock imagery (Garey-Sage and Quinlan 2015). In the mid-20th century, several archaeologists took on the task of dividing Fremont culture into cohesive styles. Among these are Marwitt's five-style classification of ceramics (1970) as well as Hurst and Louthen's classification of rock imagery (1979). The most widely used rock imagery classificatory scheme was created by Polly Schaafsma in 1971.

Polly Schaafsma's Stylistic Analysis

Knowing about Donald Scott's collection of photographs in the Peabody Museum, Professor Stephen Williams sought an archaeologist to study and publish the data from the photos. Polly Schaafsma took up the challenge to identify stylistic elements and sort them by region. The books that resulted from this effort, Schaafsma's *Rock Art of Utah* (1971) and its follow-up *Indian Rock Art of the Southwest* (1986), are the most influential publications on Fremont rock imagery. Schaafsma described her process as follows:

> The major stylistic categories were preliminarily determined by a rough sorting of the photographs according to their general appearance and on the basis of an

> intuitive evaluation of the elements present. With minor modifications the general validity of these categories was later substantiated, and the groups were refined by an objective analysis of the elements combined with a careful consideration of the techniques employed and of the aesthetic qualities present [Schaafsma 1971:3].

Schaafsma sorted the photos of panels by first grouping together alike art. She then returned to the photographs and refined her sorting by technique and style. These methods resulted in classifications such as the following: "The Classic Vernal anthropomorph is characterized by a large trapezoidal body and a simple, large round, rectangular, or bucket-shaped head" (1971:15). Later, this classification scheme was used widely among Fremont archaeologists.

Polly Schaafsma separated Fremont rock imagery into four main styles: Classic Vernal Style, Northern and Southern San Rafael Styles, and Sevier Style A. Anthropomorphs from the CCC region are considered Sevier Style A, while those from Grand Staircase Escalante are Southern San Rafael (Schaafsma 1971). The styles are geographically distinct, with some areas of overlap.

Thanks to the huge amount of data in the photograph collection, Polly Schaafsma synthesized much more information than she could have gathered on her own. However, there were some shortcomings to her methods due to the lack of sampling strategy employed by Donald Scott. Because the Claflin-Emerson expedition recorded rock imagery sporadically, the sample Schaafsma used was biased towards large and aesthetically pleasing sites and did not present an accurate summary of all the rock imagery. For example, Schaafsma listed only 13 horned serpents from Nine Mile Canyon, though they were later found to be the second most common zoomorph and therefore underrepresented in the original sample (Spangler 2013). Another issue with Schaafsma's work was that the so-called "intuitive evaluation" she

performed was neither objective nor replicable because its criteria were not clearly established. Despite these weaknesses with her dataset, Schaafsma's two largest contributions to rock imagery studies were to create a typological scheme and to establish a set of vocabulary to define Fremont design elements. Chris Watkins and I took advantage of both of those contributions when creating the coding packet and the Fremont Rock Art Project (FRAP) to further systematize the study of Fremont rock imagery, eliminating the sampling issues from Schaafsma's early rock imagery study.

Like Schaafsma, I have observed and tabulated design elements, but I have chosen to focus on one region—Clear Creek Canyon—to apply this design analysis to a complete regional sample of anthropomorphs and to eliminate sampling bias. The implementation of a new coding packet and a collaborative database allows my study to be replicated at other Fremont rock imagery sites, as demonstrated by my comparative analysis of rock imagery from Grand Staircase-Escalante National Monument. I have conducted statistical tests to look for the concurrence of design forms within the geographic context of CCC. Because the FRAP allows for comparison between different regions, it differs from the recent trends of Fremont rock imagery research. This is possible because I use the same criteria from the coding packet to analyze both sites and compile the information into one database, allowing direct comparison.

Reports, Surveys, and Interpretations of Individual Sites

Most rock imagery literature today deals exclusively with rock imagery of a small geographic region, making Schaafsma's work unique in terms of its scope. Typical rock imagery research focuses on the art from one site or region rather than Fremont rock imagery as a whole. Efforts to understand rock imagery normally begin by cataloging images, but as more research is done on a region, it transitions to include interpretation. Often these early efforts are part of

technical reports. For example, the 1992 survey and excavation of CCC led to the report *Rock Art of Clear Creek Canyon in Central Utah* (Baker and Billat 1999), a report which exclusively describes the different panels without comparing them to art from other regions.

Books and articles which interpret and find cultural meaning in Fremont rock imagery, usually by classifying them, are rarer. There is some debate about whether European American anthropologists can correctly interpret Native American rock imagery, or whether their biases disqualify them from this endeavor. Brigham Young University's *Occasional Papers No. 9* presents two perspectives on the topic. One is from Jerry Spangler (2004), and one is from Ray Matheny et al (2004). Both focus on the rock imagery of Nine Mile Canyon.

In his article "Categories and Conundrums," Spangler says that the classificatory approach to rock imagery cannot be used to show Fremont adaptation and ideology. He states that we need "theoretically sound, problem-oriented rock art research that will address questions of human behavior… the entire intellectual exercise of categorizing rock art by representational motif is fraught with Eurocentric bias" (Spangler 2004:125). Spangler suggests that classifying and reclassifying rock imagery is not the way to learn from it, because we are constantly projecting our cultural experiences and biases onto it.

Alternatively, Matheny et al. create a compelling argument for using classification techniques to learn about Fremont ideology and adaptation to the environment. The authors use a combination of ethnography, excavation, and ecology to validate their interpretations of hunting scenes and found merit in defining the type of art presented. Matheny et al. look for evidence of hunting methods seen in rock imagery, including "structured animal drives, enclosures, nets, ambushes, organized communal hunts, as well as hunting by individuals, and uses of dogs" (Matheny 2004:158).

Unlike Spangler, Matheny et al. saw that classifying rock imagery can bring added knowledge to the study of the Fremont, even if it is not fully understood. They stated that rock imagery was "loaded with values and qualities that are cultural and historical at the same time and should not be brushed away as trivial or non-understandable" (Matheny 2004: 161).

Like Matheny, I view rock imagery as loaded with meaning and important to examine from many angles, including classification. Describing and recording specific design forms can lead to finding regional differences and similarities. Understanding interpretations of rock imagery in the context of these spatial differences reveals something about how the Fremont in different areas interacted, who they were, and the meaning that they shared.

Avocational Publications

Today, rock imagery continues to generate much attention from the public while being largely ignored by professional archaeologists. This may be due to its status as the most recognizable physical manifestation of the Fremont, as well as a trend of only deferring to Native American voices in regard to the interpretation of meaning.

In April 2023 I attended the rock art interest group at the annual Society for American Archaeology conference in Portland. The two main themes discussed included (1) the lack of professional research produced and (2) protecting and removing graffiti from rock imagery. Several people in attendance had written theses or dissertations about rock imagery, though several of those works focused on the art from a tourist and recreational perspective, with titles such as *The Effect of Moral and Threat Appeals on Reducing Depreciative Behaviors at Rock Art Sites* (Podolinsky 2022).

When it comes to interpreting rock imagery, many believe that Native American voices should be elevated above those of non-native professional archaeologists. Native archaeologists take a more holistic perspective regarding rock imagery due to their indigenous knowledge of the cultural, environmental, religious, and traditional context of these images. This allows them to see the meaning in a different way that may be culturally embedded in rock imagery. In a 2023 Crow Canyon seminar, native archaeologist Emily Van Alst pointed out how design names including the term "rock art" are western conventions and that their Eurocentric biases should be acknowledged whenever possible (Van Alst 2023). While Native perspectives on rock imagery exist, they are not as visible or accessible as those of non-native professional archaeologists. In my research I spent hours contacting tribal offices and historical societies looking for the unpublished manuscript *Clear Creek Project* by LaVan Martineau (1985). Eventually, Martineau's daughter Shanandoah Martineau Anderson had to pull her copy out of storage, scan it, and email it to me. This trend is problematic and impedes the contributions of Native Americans to archaeology.

Still, much is being said on the topic of Fremont rock imagery. The Utah Rock Art Research Association (URARA) has an annual symposium in which an average of 10-20 papers are presented about rock imagery. Topics range from interpretations of art (Jenkinson 2023; Jones and Drover 2019; Patterson 2022) to public policy and graffiti removal (Acerson 2022; Patterson 2019). Many of the participants of URARA are professional archaeologists with ties to academia or land agencies, such as BLM archaeologist Byron Loosle (2022). Still others are avocational rock imagery enthusiasts who lack formal archaeological training but make up for it in passion, knowledge, and experience. URARA also has an archive of photos, stories, and

information called Patina. The webpage is described as a "people's forum" where knowledge of rock imagery can be continuously expanded.[2]

Studies of Fremont anthropomorphic figurines can provide insight into rock imagery, as the two are often linked together (Warner 1982). Dave Yoder (2023) has analyzed 811 anthropomorphic figurines, breaking them down by design element and searching for differences between figures from the Colorado Plateau versus those from the Great Basin. His study recorded that of the figurines from the Great Basin, 84% have mouths and 74% have nostrils. This contrasted with the Colorado Plateau figurines, where none have nostrils and only one (a stylistic outlier in multiple ways) has a mouth. Yoder tied this stark stylistic contrast to contemporary Native American beliefs about breath. Another one of his findings is that female figurines are often depicted with string skirts, while males are often depicted with loincloths. Although this thesis does not investigate either clothing or facial features, this study is an example of future directions for rock imagery studies.

Regional Background

This thesis focuses primarily on trends in the rock imagery of Clear Creek Canyon. Throughout the course of the project, I determined that it would be most helpful to apply my methodology to rock imagery from Grand Staircase-Escalante National Monument as well to see if I could detect differences across regions. The abbreviation "CCC" is frequently used to refer to Clear Creek Canyon, while "GSENM" is used to refer to Grand Staircase-Escalante National

[2] https://urara.wildapricot.org/Welcome-to-Patina

Monument. The history and goals of rock imagery projects in the two regions have been summarized below.

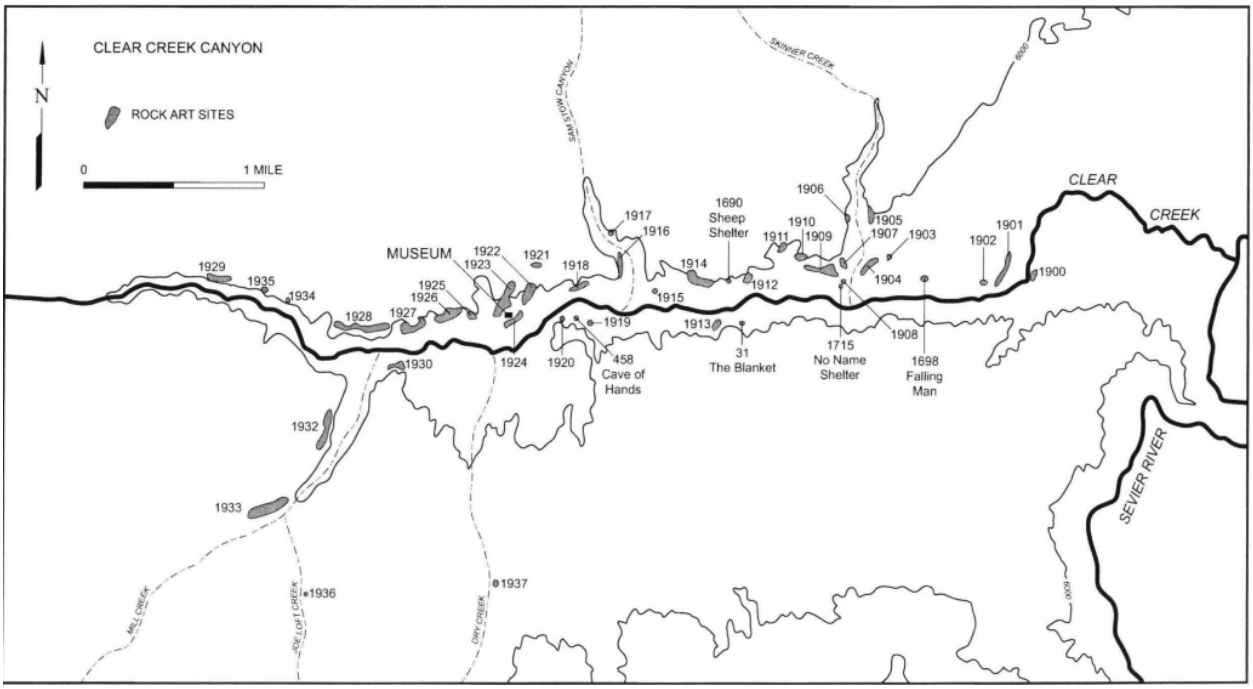

Figure 2.2. Rock imagery sites at CCC; 42SV is assumed for all sites (Baker and Billat 1999).

Clear Creek Canyon

Clear Creek Canyon is a region of Utah known for its density of Fremont sites (Figure 2.2). The CCC project data was selected because of its connection with BYU's Office of Public Archaeology and the general ease of accessibility to the data. It is a large, well-known area with 405 well-recorded anthropomorphic figures—a quantity suitable for running effective and meaningful statistical tests while completing all coding of the anthropomorphs within the time frame of a master's thesis. Site forms for CCC were easily accessible and contained both photographs, descriptions, and drawings of most panels.

Clear Creek Canyon is located in Sevier County, Utah, about 25 miles southwest of Richfield. In 1979, contract archaeologists identified the site Icicle Bench while surveying the area prior to the construction of Interstate 70. Records show that much of the archaeology there was already known, although it had not been discussed in academic outlets. In 1927, newspaperman Frank Beckwith published a photo of a CCC pictograph in a Utah periodical (Beckwith 1927), and in 1931 Beckwith wrote an *El Palacio* article comparing animal art in CCC to Nine Mile Canyon (Beckwith 1931). However, 1979 marked the beginning of a period of systematic excavation.

BYU's Office of Public Archaeology (OPA) was contracted to excavate CCC from 1983-1984. Five main collaborators—BYU's OPA, the BLM, the Forest Service, Weber State University, and the Paiute tribe—worked together on the project. Many sites from the area were thoroughly excavated, including Five Finger Ridge, which was at the time the largest excavated Fremont village site. The site was rediscovered by local Clifford Magleby and excavated by OPA before being destroyed in the highway construction (Janetski et al. 1985).

There were two key emphases for the CCC Project. The first was working to understand Fremont regional organization. Eleven sites were excavated and over 50 were found during survey[3]. This allowed archaeologists to see how Fremont people established villages and trade patterns in relation to each other (Janetski et al. 1998). My thesis likewise deals with the

[3] Excavated sites include (from West to East) Five Finger Ridge, Cave of 100 Hands, Erosion Shelter, Sheep Shelter, Lott's Farm, No Name Shelter, Radford Roost, Radford Cave, Falling Man Granary, Coyote Granary, and Icicle Bench. As evidenced by the name, these sites included two granaries, four sites with Fremont architecture (Icicle Bench, Radford Roost, Lott's Farm, and Five Finger Ridge) and several caves (Janetski et. al 1998).

distribution of art across a regional community, touching on ideas of regional organization and influence.

The second major emphasis of the CCC project was exploring and cataloguing rock imagery in the region. This occurred in two phases. The Paiute tribe lobbied for funds and conducted phase one of a two-part rock imagery survey, which took place in 1984. LaVan Martineau interpreted many of these panels from a Paiute perspective. He assembled his thoughts into an unpublished manuscript. I obtained a copy of this manuscript through communication with LaVan's daughter Shanandoah Martineau Anderson.

Clear Creek Project by LaVan Martineau (1985) applied to CCC concepts which Martineau originally published in his 1973 book *The Rocks Begin to Speak* (Martineau 1973). Through his experience, he has hypothesized that combinations of different symbols on panels can be read through cryptanalysis and that they describe both mythic tales and historical events. In this manuscript, Martineau reveals his own interpretations of individual panels based on extensive research and communication with modern Hopi and Puebloan tribes. Martineau wrote that rock imagery is a "substitute for language and not an art form" and therefore necessitates serious analysis and interpretation (Martineau 1985:45).

Martineau also stated that although "many people who study rock writings mistakenly insist they are different art styles found in various parts of the country… local peculiarities are nothing more than topic differences" (Martineau 1985:4). Though I defer to Martineau's understanding of panel meanings, I have found through this research that there are morphological differences in how anthropomorphs are depicted across and between regions. These differences in how heads and bodies are portrayed accounts for some of the stylistic differences which Schaafsma (1971) described and which I have tallied through Chris Watkins' coding packet.

Phase two was conducted in 1992 by BYU. Forty-three sites containing 697 panels of rock imagery were recorded, which included over 3,000 individual elements (Janetski et al. 1985). These site reports, including their photographs and drawings, were the main resource I consulted for my initial cataloguing and coding of the anthropomorphs associated with the Fremont that occupied the Clear Creek River valley.

Shane Baker and Scott Billat (1999) summarized the results of the CCC project in *The Rock Art of Clear Creek Canyon in Central Utah*. In this publication, Baker and Billat recorded the rock imagery panels, broke them down into individual elements, examined the placement of pictographs and petroglyphs it in the context of local geology, and discussed their results under the theoretical lenses of Binford, Levi-Strauss, Brody, Olsen, and Ives. The report is based on data gathered during both phases of survey. The bulk of it is made up of descriptions of panels interspersed with drawings of the art.

According to Baker and Billat, the geology of CCC includes alluvial fill and volcanic flows. The different minerals create contrasting layers of color—an ideal canvas for rock imagery. The authors found "[a]… significant distribution of rock imagery sites on the basis of geological constraints" (Baker and Billat 1999:5). Most rock imagery at CCC is found in lower areas with wider alluvial flat bottoms (ideal places for the Fremont to live and work in) and exposure to Joe Lott tuff. The tuff is the consolidation of an ash flow from the eruption of the nearby Mount Belknap around 19 million years ago and is up to 48 m thick in places (Budding et al. 1987). Because of the distinct color contrast between the white interior tuff and the weathered and iron-stained exterior, Joe Lott tuff provides the highest contrast for carving petroglyphs and is evidence that the Fremont sought out the best canvases for producing highly-visible art (Baker and Billat 1999)..

The largest legacy of the CCC Project was the establishment of Fremont Indian State Park. The official website boasts that the park has "a film, artifacts, hands-on activities, rock imagery tours and exhibits [that] reveal the lives of these Fremont Indians" (stateparks.utah.gov 2023). The park was established after several local agencies, individuals and historical societies lobbied for a Fremont park. It is oriented towards informing the public about how the Fremont lived and letting them experience it for themselves.

Grand Staircase-Escalante National Monument

Because the goal of this project was to tabulate design elements in a replicable way, a second site was selected for comparison with Clear Creek. Grand Staircase-Escalante National Monument (GSENM) was chosen also based on its association with BYU's OPA and suitability for analysis (Figure 2.3). It contained 77 anthropomorphs, enough to compare to the variability in CCC. GSENM is located in Garfield County, Utah, and is a national monument bound by Capitol Reef National Park, Dixie National Forest, the Glen Canyon Escalante Plateau, and the Kaiparowits Plateau. It is an ecologically diverse region and has a stunning landscape (Harris 2003).

Rock imagery sites were recorded as part of a multi-year project called "The BYU Escalante Drainage Project" which included survey and excavation by OPA and the 2002 BYU field school. The reports consulted in this thesis are from the 2001, 2002 and 2003 field seasons (Baer and Sauer 2003; Harris 2003). The goal of the 2001/2002 research was to look at ethnicity and ideology, while the goal of the 2003 research was "to establish a length of occupation of the Escalante Canyon using culturally and temporally definable styles" (Harris 2003:131). Because of this goal, it was important to determine cultural affiliation of rock imagery sites. They include Barrier Canyon, Fremont, Archaic, Kayenta and Unknown Aboriginal rock imagery as well as a

few Euro-American panels which were not analyzed in this thesis. Rich's Shelter (42GA882) is included in the site forms for the GSENM project but was not analyzed as a GSENM site in this thesis because it is much further south than the Escalante region (personal communication with Christopher Watkins).

Summary

This chapter discussed the strong tradition of Fremont rock imagery studies, but it also revealed a messy and incomplete patchwork of theoretical and methodological approaches. In the next two chapters, I explore theory and methods which will strengthen the field of rock imagery studies. After that, I apply these methods to anthropomorphs at CCC and GSENM and apply my chosen archaeological theories to discuss the results of my analysis.

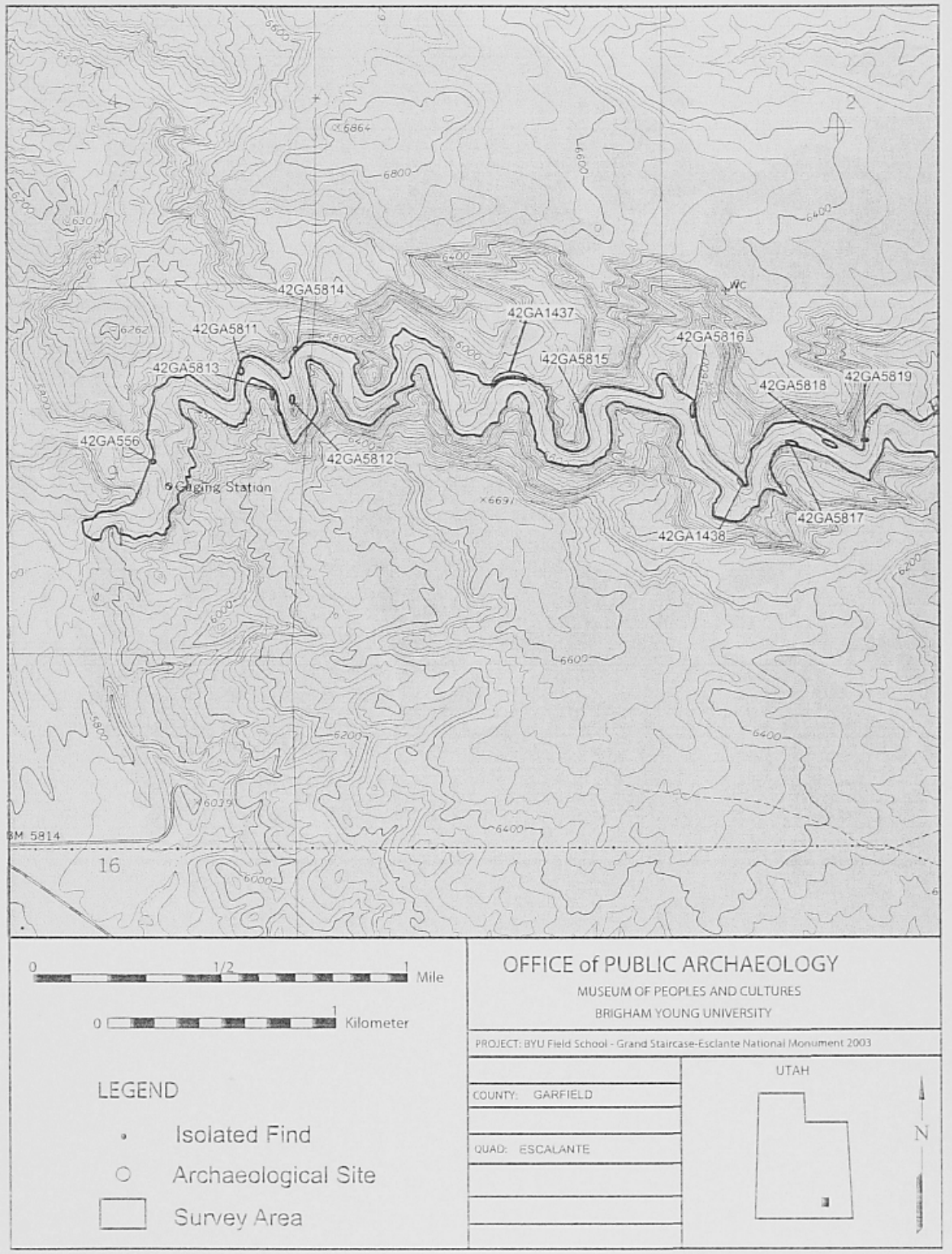

Figure 2.3. Map of rock imagery sites at GSENM (BYU 2003).

3. Theory

The purpose of this thesis is to create and test a way to catalogue Fremont art that may better aid in interpreting its meaning and function. It operates under the cultural-historical mindset that artifacts express cultural norms, and norms define what a culture is (Johnson 2019). This is the same theoretical framework under which Morss (1931) operated when he defined the Fremont, but this thesis works to deepen archaeologists'understanding of the Fremont by exploring which design forms appeared commonly together on anthropomorphs across the landscape, and whether the patterns in CCC are different from GSENM.

Gathering comprehensive data is a necessary and natural steppingstone to finding meaning in archaeological types. My theoretical leanings inform why I believe gathering this data is significant, as well as the methods used to collect the data. The two perspectives from which I approach this thesis are landscape archaeology and anthropology of the body, and this chapter provides an overview of these concepts.

Landscape Archaeology

Landscape archaeology is the study of how landscapes are culturally constructed and experienced by humans. Everyday manifestations of culturally constructed landscapes abound (e.g. game trails become walking paths—walking paths become wagon wheel ruts—wagon wheel ruts become highways or railroads), but rock imagery is particularly compelling as it is a

deliberate modification visible to anyone traversing the landscape. The rock imagery of CCC is a highly visible modification to the Fremont landscape which remains visible and interesting to archaeologists today.

Landscape archaeology arose in the mid-20th century as archaeologists began to apply geographic principles to their work. This emerging theoretical perspective expanded the spatial focus of archaeology from just the units inside a site to the landscape into which a site is situated. Landscape archaeologists drew on the British romantic empirical tradition of taking long walks across a landscape. Historians such as W.G. Hoskins used this perspective to teach appreciation for home landscapes in a post-war world. Hoskins's 1955 book *The Making of the English Landscape* was a seminal work in this discipline (Johnson 2008).

In the 1990s, post-processualists shifted the focus of landscape archaeology through a rejection of the deterministic view that sites were nestled into untouched natural spaces. Archaeological understanding of landscapes shifted to mean a space that was not just observable but rather was both culturally constructed and experienced by humans. This led to the modern British phenomenological approach to landscape archaeology, where archaeologists walk landscapes with the express purpose of experiencing them in the same way that the ancient inhabitants had, rather than merely appreciating their beauty (Parcero-Oubiña at al. 2014). This has huge implications for understanding the meaning and purpose of rock imagery in the modern age.

Western perspectives in the 21st century often associate rock imagery more with the natural environment than with the built world. This disconnect occurs because we most often see rock imagery when we are out on a hike, intentionally trying to commune with nature. For the Fremont, rock imagery was one of the environmental changes that appeared as an area became

more accessible and urbanized (Antrop 2005). Thus far, CCC is likely one of the largest settlements of ancient Fremont ever excavated. As Baker and Billat (1999) suggested, most rock imagery in CCC was found near wide alluvial flats, ideal for inhabitable or working sites. To grasp the significance of rock imagery, I suggest that taking a landscape approach to this medium of communication requires that viewers must stop thinking of it as part of the natural surroundings and instead reconceptualize it as indicative of human presence, deliberately created to convey meaning. But how can archaeologists today get at what that meaning was, why it was created, and how it was perceived?

Matthew Johnson (2012) has suggested that all archaeologists are, to some degree, phenomenologists. Due to the unique canvas of petroglyphs and pictographs, it is especially important to experience rock imagery in person. By the time I visited Fremont State Park for the first time, I had spent hours gathering, examining, and coding photos of rock imagery panels. I thought that I understood their appearance and significance. When I first visited the park, I recognized many of the panels on site, but it felt completely different to see the rock imagery in the context of the landscape rather than on a laptop screen.

Upon seeing the canyon in person, I was struck by the dizzying heights at which some of the rock imagery panels were (Figure 3.1). Newspaper rock (42SV1928.B50) towers on a ledge high above the bottom of the canyon, yet the cliff face is one of the most densely covered panels in the canyon, containing at least 13 anthropomorphs among hundreds of other elements. Of course, the canyon has changed markedly in the last 1,000 years. Rockfall has steepened cliff faces, many structures in the canyon have disappeared, and the development of roads for mining and interstate travel has accelerated erosion on the rock imagery panels in the canyon, making

Figure 3.1. Demonstration of the height of panel 42SV1918.4 with Alyssa Merrill (1.73 m tall) for scale.

Figure 3.2. Hunting Panel from Nine Mile Canyon (Site 42DC1082, Panel 4). The panel points to a place in the canyon where net hunting was a common practice, demonstrating how the Fremont marked their landscape. Drawing by Julia Matheny (Matheny et al. 2004).

panels like Newspaper rock less accessible (personal communication with Elizabeth Nagengast-Stevens). Regardless, accessing high panels would have required deft climbing for the Fremont in this region. My visit to CCC raised the question of how and why the Fremont chose to place their art where they did, and what kind of viewing experience this led to. I have hypothesized three determining factors for how the Fremont chose sites for rock imagery based on other rock imagery studies and my own modern analogies.

One reason artists chose visible sites was to convey a message far and wide. An example of a message is the hunting scene referenced by Matheny et al (2004) on panel 42DC1082.4

which indicates a narrow point in the canyon perfect for hunting animals like rabbits with nets (Figure 3.2). Inaccessibility due to height can be synonymous with visibility in a canyon setting, as in the case of Newspaper Rock. As a modern parallel, traffic lights are not placed down low, or nobody would see them. The rock canvas chosen was similarly important for visibility. A higher concentration of sites with rock imagery are found in areas with Joe Lott Tuff, which has a white interior and a weathered and oxidized exterior. Carving this tuff generates higher-contrast carvings and therefore more visible art than other geologic formations (Baker and Billat 1999).

Second, artists may have chosen to mark sacred sites with corresponding symbols. I presented with collaborators at the Great Basin Anthropological Conference on several ritual characters that appear frequently across the CCC landscape (Watkins et al. 2023). These include shapeshifters, possible shamans holding ritual paraphernalia and anthropomorphs with alien-like masks or headdresses. One of our purposes in tracking them was to determine whether ritual figures were tied to certain parts of the landscape. To accomplish this, we kept a running list of places where these figures are found, including CCC, Moab, Sego Canyon, and Rochester Creek. The research is in an early stage, so patterns have not been identified yet, but sufficient data have been collected to demonstrate that the distribution of these characters extends beyond CCC (Watkins et al. 2023).

A final factor to consider is that the *creation* of the rock imagery itself could have been a ritual process, in which sites would have been chosen less on their location but rather on how large the standing room or "stage"surrounding the panel was. Aaron Wright cites this as a determining factor for the placement of Hohokam rock imagery in his book *Religion on the Rocks: Hohokam Rock Art, Ritual Process, and Social Transformation* (2014). A stage determines how many people can be involved in a ritual act. This could limit those involved to a

small group for more sacred activities, or it could use a large stage to extend the opportunity to participate to many people.

These three hypotheses have led me to consider the scale at which to assess rock imagery, based on both the viewing and creating experience. Rock imagery is generally divided into sites, areas, panels, elements, and figures. Baker and Bilat (1999:11) define a site as "any single locus of rock imagery or aggregation of multiple closely associated loci. Site boundaries are established following natural topographic features and divisions." A panel is defined as "a discrete rock surface containing rock imagery set off by prominent natural features such as angles, cracks, or fissures from the rest of the cliff or boulder of which it is part" (1999:11). As acknowledged above, the cliff faces have changed in the millennium since the creation of rock imagery at CCC, causing changes to the natural breaks between panels.

This thesis gathers data about anthropomorphs on an individual, panel, and site level to explore the fact that some anthropomorphs are meant to be seen together and should be analyzed as a unit. Some panels display scenes which have interacting figures, such as a line of sideways-facing figures in a row, a common motif at CCC (panel 42SV1928.60).

For archaeologists, the meaning of rock imagery can derive from two primary sources. The first of these is the creation experience. As Aaron Wright (2014) hypothesized about rock imagery, its creation may have been part of a ritual act. In this case, the intended purpose of the rock imagery is fulfilled in creating, rather than viewing the images. Alternately, some rock imagery would have been created for the purpose of being seen. This could be to mark territory, provide instruction, highlight parts of the landscape, or convey ritual meaning, like in Matheny et al. (2004).

Figure 3.3. East-facing overview of CCC.

In the case of both creation and viewing, different meanings are found when focusing on the art at a panel level versus at a site level. A modern parallel is that a site is akin to a room in a museum, whereas a panel is an individual framed piece of art. Both provide a different but equally valid viewing experience. Panels offer a more compact surface which could have been created or viewed simultaneously. However, panels were sometimes marked over multiple times and covered in various styles and elements, as in the case of Newspaper Rock (42SV1928.B50), meaning the content of one panel does not always form a coherent scene that was created at one time. Regardless, the compactness and ease of viewing makes panels a viable level for analysis.

Because sites are sometimes declared arbitrarily by archaeologists, there is no clear evidence of whether panels are purposefully adjacent. However, a phenomenological approach reveals that panels on the same cliff face can be viewed in quick succession when walking past them. This potentially imbues their arrangement with new meaning. Likewise, multiple panels at one site could mean the same site was used multiple times as a "stage" for a ritual creation process. Sites are also more likely to be altered by multiple artists, meaning that a study of sites is more representative of the local Fremont as a whole rather than the whims of an individual (Figure 3.3).

While all of these factors are deeply intertwined with each other, it is important to point out that the primary purpose of my thesis is not to pinpoint the reasons why rock imagery was created in particular places. I do attempt to explore the possible encoded patterns in the imagery that could assist future archaeologists in understanding the meaning behind the rock imagery placement.

Archaeology of the Body

Borrowing from the field of semiotics, rock imagery functions as a sign which expresses meaning in context much the same way as language can (Chandler 2022). Whether intentional or not, artists use symbols to convey messages about how they saw the world and what was important to them. Ideas about how the Fremont saw human beings are likely encoded into their artistic depictions of humans. This section reviews aspects of the field of the archaeology of the body to explore the importance of studying anthropomorphs as a way to understand Fremont perceptions of their own bodies manifest in their art.

Dusan Boric and John Robb (2008) wrote a brief history of archaeological body theory in which they described three major fields which have historically contributed to body studies. The first of the fields was art history, particularly classics. In this field, aspirational depictions of the human form through sculpture, pottery, and other mediums elevate the human body to a work of art (Squire 2011). The second movement was feminist archaeology movement. This movement began when Margaret W. Conkey and Janet D. Spector (1984) called for an examination of androcentrism in archaeology and its use to substantiate archaeologists' contemporary beliefs about the body, sex, and gender. Third, phenomenology has focused on studying embodied experiences. This comes in the form of embodied creation and enjoyment of art (Boric and Robb 2008).[4]

Rosemary Joyce (2005) wrote that the body has many functions including being the site of lived experience and embodied agency. The inhabitation of the human body (which has not changed much in the last millennium) is something that has the potential to connect modern viewers to the Fremont, because all people experience the world, move around, and make and execute decisions through the same basic biological functions. Throughout both history and prehistory, humans have chosen to immortalize all sorts of experiences, both singular and mundane, in art.

Much of Fremont art records canon human experiences such as menstruation (42SV1909.C20:1), sexual intercourse (the Owl Panel at Nine Mile Canyon), creating music

[4] Each of these movements had an impact on my decision to pursue rock imagery studies. My Western upbringing led me to view depictions of the human body as art which deserve to be studied. Feminist archaeology sparked within me a desire to understand what design elements of the body (especially genitals) say about an individual's identity. I am interested in exploring these questions from a phenomenological standpoint, in part, because of my experience hiking in Utah.

(Kokopelli), group dynamics (Anthropomorphs 1-4, SV1909.2), and more. Though mundane, these experiences make up the bulk of human experience and are unambiguous due to the universality of the events they depict. Depictions of human action can also be used to mark specific places as sites of ritual or survival activity involving humans. Narrative scenes such as the "Great Hunt," Coyote, and net hunting panels of Nine Mile Canyon communicate stories that are meaningful if not completely universal aspects of Fremont life (Matheny and Matheny 2005).

In this study, I focused on head morphology, body morphology, and the presence of arms, legs, and genitals. I chose these body parts because of their centrality to experiencing the world. Heads are the site of interaction, sensory intake, and the most animated and recognizable part of a person. Bodies—specifically torsos—are the site of vital organs and the main presence of the body. Genitals convey messages about reproduction and sexual dimorphism in a society. Finally, limbs are the means whereby humans set in motion physical actions, whether through walking, picking things up, or other actions.

Anthropomorphic art is often used to express not only reality but also beauty ideals, as in the example of Classical Greek and Roman sculptures (Joyce 2005). Fremont petroglyphs, pictographs, and figurines are known for their exaggerated trapezoidal bodies which show off broad shoulders, tapered waists, and often extremely flared hips. These are unrealistic proportions which may have represented glamorized beauty standards or an exaggerated appreciation for human sexual dimorphism.

Humans also use their bodies to express their identity by altering or ornamenting their appearance, and this practice is depicted in Fremont rock imagery as well. Rosemary Joyce (2005:142) said of this practice that "representational practices literally expanded the site of the embodied person, incorporating representations, spaces, and items of costume in the person, even

when these items were removed from direct bodily contact." Rock imagery could be used to cement a person's status as a religious leader by painting them with ritual attire and paraphernalia, such as the Badger Man (42SV1914.2:1).

An example of this effect is found in the Andean Moche culture. In the famous Moche Presentation narrative theme, a servant offers a cup of blood to a high-status priest wearing a distinct headdress and jewelry. When Walter Alva and Susana Menesesa unearthed the royal Sipan burial in 1987, they found a mummy wearing the same regalia depicted on the priest in the Presentation scene. Archaeologists knew exactly what this "Lord of Sipan's" social status was because the role of priest was so well-established and documented in Moche art (Alva and Donnan 1993; Quilter 1997).

By creating representative art, the Fremont were possibly creating proxy humans through which they could channel some sort of relationship. Painting or carving a human figure into rock represents continuing a relationship with that person. These could have been depictions of humans who were deceased, or simply not present (Tarlow 2002). Depictions of supernatural beings could also serve as a proxy for the supernatural and cement a relationship with them. Through these images, the Fremont could attempt to harness the power of a supernatural being, a sort of sympathetic magic.[5]

Whether intentional or not, Fremont artists projected their understanding of the world onto the petroglyphs and pictographs they created. Through marking their landscape, they

[5] These supernatural beings are recognizable by their distinct design forms, specifically headdresses as discussed by Maya Watkins in her senior archaeology thesis (2024) and head shaped as discussed by Chris Watkins et al. (2023).

created a cultural environment laden with ideas about the meaning of what it means to experience being human in an embodied state.

4. Methods

Research Design

I began this project gathering existing documentation on individual anthropomorphs from the Clear Creek Canyon (CCC) and Grand Staircase-Escalante National Monument (GSENM) areas and coded them based on their design elements. I then plotted each design element geographically to compare their spatial distribution. Finally, I performed a correspondence analysis on the design elements from CCC to see which design forms appeared together. This chapter provides more details on each of these steps toward the goal of identifying trends in the distribution of various design forms in these two regions. I gathered information about individual anthropomorphs from IMACS forms located in the SHPO's SEGO database. The process of compiling this data took a few months. I first gathered administrative information about each site from the A forms. I next retrieved descriptions, drawings, and photographs of each panel from the D forms and pasted them into a Word document. I then created unique numeric identifiers for each anthropomorph so that they could be easily referred to. Geographic data was compiled mostly from the A and D forms of each site as well as GIS polygons provided to me by Logan Simpson. I also collected my own UTMs for panels at several CCC sites.

After compiling these images, my next task was to systematically describe the individual design elements of each anthropomorph, similar to Polly Schaafsma's tabulations in the index of

The Rock Art of Utah (1971). This step was a joint effort in collaboration with Chris Watkins and Maya Watkins (Watkins et al. 2023).

The goal of systematically identifying and describing the design elements of anthropomorphs required the creation of a coding system which related to each design element of the anthropomorphs in a more-or-less objective way, generating replicable results from different analysists. In collaboration with Chris Watkins and Maya Watkins, we developed this coding packet based on Henry Wallace's (2001a, 2001b, 2001c, 2001d, 2001e, 2004a, 2004b; Abbott et al. 2012) analysis of Hohokam Red-on-buff ceramics.[6] Wallace's coding packet breaks down complex ceramic designs into small motifs which could be easily described. Design elements were determined based on elements which had been identified in other Fremont rock imagery literature (Baker and Billat 1999; Cole 1990; Faris 1987; Harris 2003; Marymor 2023; Schaafsma 1971, 1986; Warner 1984; Watkins 2023).

To code an anthropomorph, the analyst selected the design form from a prescribed list of all design forms for each design element.[7] Here, "design element" refers to a physical feature such as head morphology, body morphology, held objects, legs, etc. "Design form" is the term that I use to designate individual variations of a design element, such as a triangular or bucket-shaped body. The coding packet was originally developed in an Excel spreadsheet and comprises descriptions and example photographs for each design form.

[6] Select potions of this coding packet are found in Appendix A
[7] The analysts for this project were Chris Watkins, Maya Watkins, and me.

The coding packet is a comprehensive catalog of design elements that aims to be comprehensive not just in describing every element of each anthropomorph, but with the intent of also being applied to Fremont anthropomorphs of any region. It includes codes for head and

Figure 4.1. Comparison between a drawing and photograph of Panel 16 from site 42SV1933 (Brigham Young University 1992).

body morphology, facial features, limbs, clothing, decoration, headgear, and held items. It also includes codes for jewelry and other details found mostly in the Classic Vernal anthropomorphs, despite CCC being Sevier style A (a style in which anthropomorphs have comparatively little ornamentation).

At the start of the project, each participant coded the same set of 20 anthropomorphs to determine if there were differences in how each person perceived each element and to calibrate the process of applying the coding packet. We then refined categories for which we collectively

recorded a variety of results and eliminated any redundancies. For the design elements that were unclear or difficult to identify, we left comments describing our issues in identification and consulted with each other. As we continued to refine our methods, we continued to add more examples and more specific descriptions as needed to the coding packet.

Because of the grainy quality of many of the 1992 BYU photos, most of our coding was completed using the associated drawings rather than photos of the art.[8] It is important to note that basing our data collection primarily on the drawings relied on the interpretation of the artist who originally depicted the anthropomorphs and likely introduced some interpretive relativity or error (Figure 4.1). This could possibly skew some of the project results. All participants consulted both drawings and written descriptions from the original IMACS forms to further refine our identifications. Ultimately, we coded only anthropomorphs which could be clearly identified, whether or not they were mentioned in the descriptions on IMACS site forms.

Coding process

This thesis includes only a sample of all design forms from the coding packet: Head morphology, body morphology, and presence of arms, legs, and genitalia. Table 4.1 shows the design elements, along with their associated design forms identified during data collection: The process of assigning codes to each anthropomorph proceeded as follows: First, the analyst looked at a picture of a panel and matched each anthropomorph to its row in the excel sheet. Then, we looked at individual design elements (head shape, for example) and determined if a design form from the packet correlated with the element. The name of this design form was then

[8] See Appendix B

selected from a drop-down menu in the Excel sheet so that only established codes could be recorded, eliminating typos.[9] To allow for a wide range of diversity, several design elements included an option for "other" design form. These were rare elements which were not included in the normal codes. Noteworthy "other" design forms were described in the comments section of each Excel row.

Table 4.1. List of design forms used for analysis.

Design Element	**Design Form**
Head Morphology	Bucket Inverted Bucket Square/Rectangular Circular/Oval Triangle Inverted Triangle Thumb Inverted Thumb Implied Irregular Stick Absent Other
Body Morphology	Bucket Bucket, Rectangular Base Bucket, Flared Base Circular Triangle Stick Rectangular Oval Absent Other
Arms	Absent Present
Legs	Absent Present
Genitalia	Absent Female Genitalia Male Genitalia

[9] See Appendix C

In situations where a correlating code could not be assigned to an anthropomorph, the design element cell was left blank. This usually came because of poorly preserved anthropomorphs or low-quality photographs from which design elements could not be seen in the photos or drawings. At the end of our coding process, I reviewed every blank cell and made final judgements about which codes to use.

Refining UTM Coordinates through Fieldwork

On December 8th, 2023, I travelled to Fremont Indian State Park to collect data with Mike Searcy, Maya Watkins, Savannah Ririe, and Chloe Burkey of BYU. I received permission from Dr. Elizabeth Nagengast-Stevens to explore the park and hike near the panels, taking care not to touch them. The data we collected included UTMs for specific panels as well as photographs of many of the panels that were accessible. The first purpose of this was to obtain panel UTMs to analyze the anthropomorphs' distribution at a panel level for more specificity, and to test the polygons provided by Logan Simpson for accuracy. The second purpose of this trip was to take updated photos of some anthropomorphs.

Maya Watkins and I were the eyes of the project since we had coded all the rock imagery and therefore knew what to look for (Figure 4.2). Maya walked on the path to look for rock imagery from a distance. I scrambled as close to the panels as I could to look for any smaller ones up close. I also took up-close photos with my iPhone 11 Pro of individual anthropomorphs. Chloe Burkey then took overview reference photos of the panels that contained anthropomorphs. Savannah Ririe filled out the photo log, and Mike Searcy collected UTM coordinates that

Figure 4.2. Maya Watkins, Alyssa Pitts, and Mike Searcy recording UTMs and photographs of panels at CCC.

corresponded to each photo using a Trimble Geo 7 handheld GPS device running the software TerraSync. Due to the 3-5 m accuracy of the Trimble, panels that were within a few meters shared one geographic point. Back in the lab, I completed the process of matching up the points with the panel numbers that were already assigned to them during the Clear Creek project conducted by OPA.

Because we were not able to record UTMs for every panel, I approximated their locations within panels by comparing modern maps with maps provided in the site forms. I used this same process to approximate the location of panels at GSENM.

Geographic Analysis

Using RStudio, I created point plots to analyze the spatial distribution of each design form. I decided to create one plot for each design form.[10] Each anthropomorph was represented by an individual point on the plot with easting and northing UTMs as the X and Y coordinates. I used the function geom_jitter in RStudio to randomly space out points which were on the same panel. Anthropomorphs which displayed the given design form were represented as colored points, and all other anthropomorphs were plotted in the background as gray dots. My data was stored in an Excel file where each row represented a separate anthropomorph with a column for every design element and a column for the UTM coordinates for the panel on which the figure appeared.

I also made box and whisker plots which showed the distribution of each head and body form from east to west across the two regions. The plots offered specific information on the spread of each design form and made it easy to compare each form to one another. This, combined with the maps, allowed me to pull out and describe patterns in the spatial distribution of each of these design forms. The patterns which I describe are all based on a visual analysis and are not considered statistically significant.

Correspondence Analysis

In addition to seeing the geographic distribution of design forms, I performed a correspondence analysis on the data from CCC to analyze the relationship between head and

[10] I also include plots which display every form for head morphology and body morphology at both CCC and GSENM, but my analysis is based on plots of individual design forms. Plots by design element are cluttered and illegible. At CCC, for example, there are 13 forms of the head shape design element. The colors representing these design forms appeared too similar and were impossible to read

body morphology. The correspondence analysis is like a principal components analysis in that it identifies a few main factors which account for most of the variability.[11] I plotted each design form on a chart which uses the first variable (which accounts for 51.6% of variability) as the X axis and the second variable (accounting for an additional 22.9% of variability) as the Y axis. The origin of the graph represents the average combination of variables, while design forms which cluster together are affected by similar factors and tend to appear together. The strength of this relationship is represented by proximity to one another as well as distance from the origin. The correspondence analysis operates on a contingency table, which shows cooccurrences of each design form (Qualtrics.com).

Only suitable variables can be tested with a correspondence analysis. In this case, the limit which I set was cooccurrences of variables which produced an expected value of greater than one. Because some design forms were rare at CCC, they were combined with other variables for the correspondence analysis. Oval and circular bodies were combined with each other, absent bodies were combined with other bodies, implied heads were combined with absent heads, and triangle heads were combined with "other" heads. These combinations produced expected values sufficiently high for correspondence analysis. Though I attempted the same process with anthropomorphs at GSENM, I could not find a combination of variables which produced high enough expected values without losing the meaning of the original data.

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[11] I first attempted to perform a principle components analysis (PCA) to compare anthropomorphs with a given design form at both the site and panel levels. PCAs are not suited to nominal data, a problem which I tried to overcome by analyzing percents of a given site or panel with a given design element (Rogerson 2015). This resulted in a plethora of zero-percent sites, which was also not conducive to using a PCA.

Finally, in addition to these statistical methods, I explore the interaction of the variables from different angles using contingency tables of both counts and percents. Using these tables I could get a sense of relationships weighted by their frequency. The results of these analyses are in the next chapter.

5. Results

In this chapter, I discuss the results of my geospatial analysis on several design elements at CCC and GSENM. I first present descriptive statistics of the design forms and compositions of the panels. I then compare the distribution of the presence of arms, legs, genitalia, and different head and body design forms across the two regions. The chapter concludes with a correspondence analysis and cross-tabulation looking at which head and body design forms occur together at CCC.

The bulk of this chapter comprises visual plots which show the spatial distribution of anthropomorphs, isolated by one design form at a time. For head and body forms, the average easting of anthropomorphs with the given design form is marked with a star. Plots of single design forms from CCC are colored orange, while comparable plots from GSENM are blue for easy recognition. Plots which display genitalia are coded with pink points for females and blue points for males. All anthropomorphs which do not display the isolated design form are represented in the background by gray points.

I have also included a short descriptive analysis of each plot in this chapter. This description highlights any patterns and includes a reference to a specific anthropomorph with that design form. Only a selection of the most relevant head and body plots are included here, but

plots for all head and body forms can be found in appendix D. Patterns identified were based on visual analysis of the spatial distribution and are not considered statistically significant.

In this chapter, I make frequent references to specific anthropomorphs. The references include the Smithsonian trinomial site number, panel number, and figure number.[12] All figures are clearly labeled in reference drawings. The format for referring to panels is "site.panel:figure". For example, 42SV1928.50:1 indicates Figure one from panel 50 at site 42SV1928. CCC has a considerably higher total count of anthropomorphs (n=405) than GSENM (n=77). Since the samples from each of these regions are rather exhaustive, my comparison between the two regions uses percentages rather than counts.

Descriptive Statistics

Table 5.1. Descriptive statistics for anthropomorphs at CCC and GSENM.

	CC	**GSENM**
# of Anthropomorphs	405	77
# of Panels	219	25
Avg. anthropomorphs per panel	1.85	3.08
Max # anthropomorphs per panel	13	10
Range # anthropomorphs per panel	12	9
% Genitals	7.7	1.30%
% Arms	73.3	62.3
% Legs	65.9	40.3
# Genitals	31	1
# Arms	297	48
# Legs	267	31

[12] Clear Creek Canyon is located in Sevier county and all of its site numbers begin with 42SVxxxx. Grand Staircase-Escalante is in Garfield county and has site numbers beginning with 42GAxxxx. SBIF15 is an isolated find located in the Grand Staircase Escalante region.

Genitalia

Table 5.2 shows the body shapes that appeared with different genitalia. The numbers combine the one instance of female genitalia (42GA1440.2A:6) from GSENM with those from CCC. I also attempted a chi-squared test and correspondence analysis with the data, but the expected levels were too low to run meaningful statistical tests. Male genitalia are much more common than female genitalia. Male genitalia can be found on every body shape except for round and absent bodies, but there are especially large numbers found with bucket, rectangular, and stick bodies (five, five, and six, respectively). Female genitalia occur with four of the 10 body shapes (bucket, bucket with flared base, bucket with rectangular base, other, and triangle), all in low numbers.

Table 5.2. Cross-tabulation of Genitalia and body morphology. Genitalia are listed across the first row and body forms are listed down the first column.

Body Morphology	**Absent**	**Female Genitals**	**Male Genitals**
Absent	1	0	0
Bucket	87	2	5
Bucket.FB	42	2	
Bucket.RB	57	0	2
Circular	8	0	0
Other	41	1	2
Oval	6	0	1
Rectangular	50	0	5
Stick	32	0	6
Triangle	49	2	3

Genitalia at CCC

CCC contains 33 anthropomorphs with clear genitalia. Of these, seven had female genitalia (42SV1689.6:1), whereas the other 26 had male genitalia (42SV1918.3:1). Depictions of the two sexes follow strong bilateral patterning. Male genitalia are depicted on panels upstream (west), whereas female genitalia are primarily found downstream (east). All male genitalia are found west of 384500 E, with prominent clusters at the largest sites (42SV1918,42SV1923, and 42SV1928). Additionally, they are all found north of 4270000 N, meaning that they all stay clustered around Clear Creek instead of south around Mill Creek.

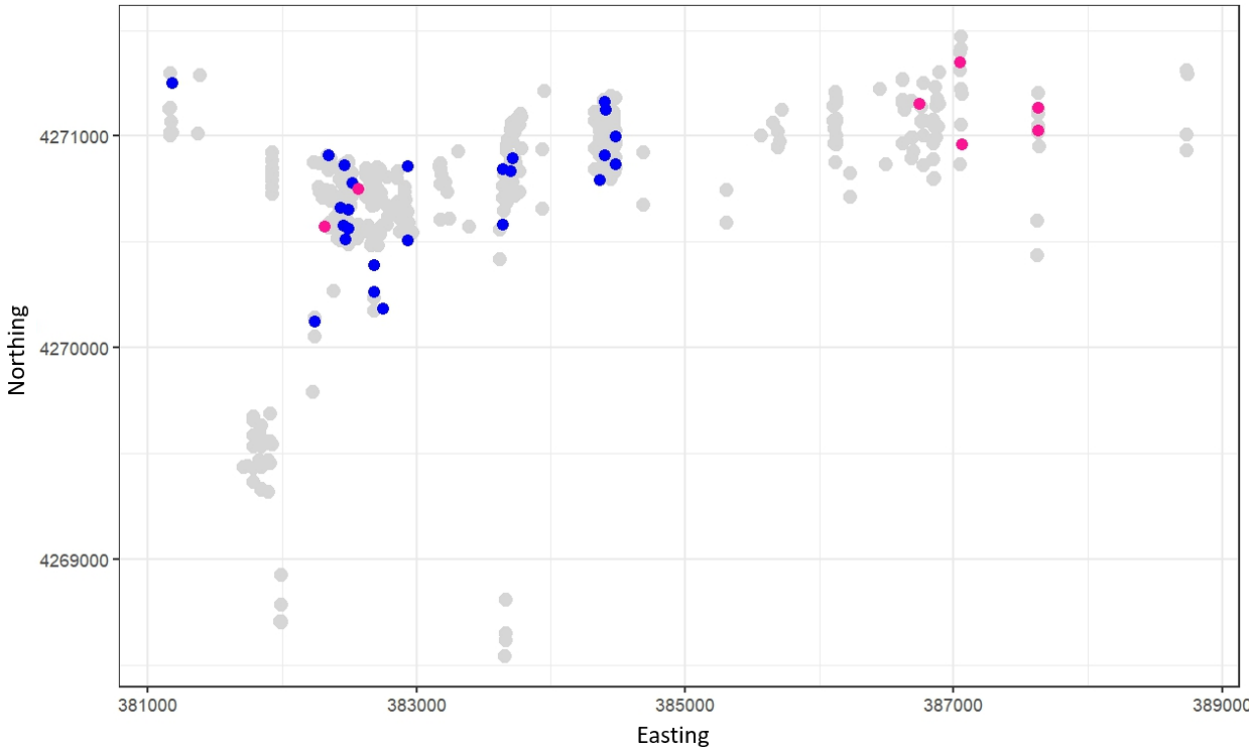

Figure 5.1. Depictions of genitalia at CCC. Pink points indicated female genitalia while blue points indicate male genitalia.

Female genitalia form two clusters (Figure 5.1). Two anthropomorphs with female genitalia are found at site 42SV1928, although they are on two different panels: B94 and B8. This site has more anthropomorphs than any other site at CCC—111 total, or over ¼ of all anthropomorphs in the canyon. These two depictions of female genitalia are between 382250 and 382750 E and intermixed with the panels of male genitalia. The second cluster comprises five anthropomorphs between 386600 and 387600 E. Site 42SV1689 has two depictions of female genitalia (on different panels), but the other three are isolated at different sites. The divide in space is extremely sharp between presence of male genitalia and the eastern-most cluster of female genitalia.

Despite these strong visual patterns, there are likely many more depictions of genitalia at CCC which I (or other recorders) may have missed when recording the design forms of anthropomorphs. Genitalia are one of the more difficult features to discern. Penises are generally exaggerated as outlined or filled-in shapes (42SV1914.17:1), but occasionally they appear as a modest stick line (42SV1689.2:1). In this case, some small penises may have been overlooked. Female genitalia are even more elusive. They are depicted in CCC anthropomorphs as either a circle (42SV1689.6:2) or a hole in the lower torso (42SV1928.B94:1). These were sometimes pecked into the rock, or sometimes the anthropomorph was superimposed over an existing natural hole. It is likely that there are several other biologically female anthropomorphs in CCC which have been obscured by the effects of 1,000 years of weathering on ambiguous genitalia.

Genitalia at GSENM

GSENM has only one portrayal of female genitalia (42GA1440.2A:6). Unlike at CCC, the sex was indicated by red pigment representative of menstrual blood rather than a visual

depiction of the genitalia. This panel is located approximately in the middle of the GSENM sites and indicates that there was no pattern of portraying genitalia in GSENM (Figure 5.2). Both CCC and GSENM have anthropomorphs depicted with loincloths and string skirts which Yoder (2023) has interpreted as representing gender. These depictions are rare, but present.[13]

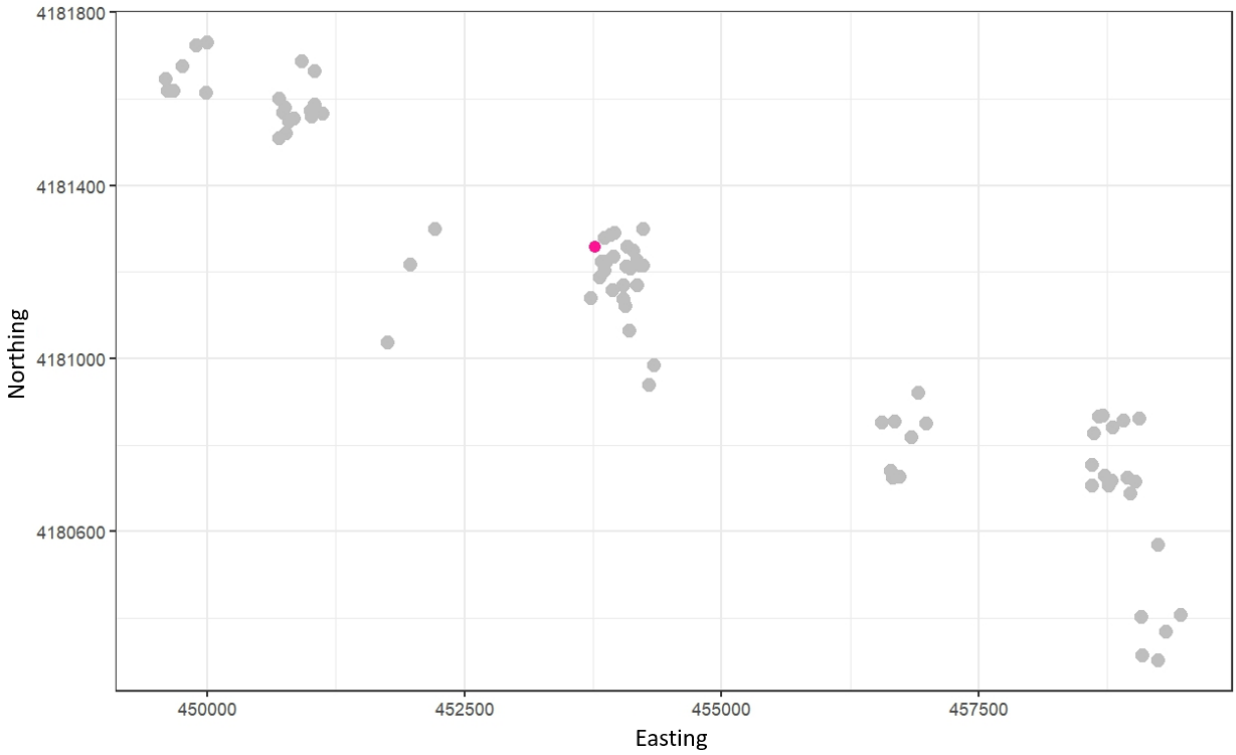

Figure 5.2. Depictions of genitalia at GSENM. Pink points indicated female genitalia.

Arms and Legs

Ams and Legs at CCC

Of the CCC anthropomorphs, 73.3% (n=297) have arms (42SV1912.2A:1). Arms are presentacross the region without any obvious visual patterning (Figure 5.3). Anthropomorphs

[13] I have chosen to discuss only biological sex in this study rather than focusing on gendered clothing, although in the future I would like to investigate whether the same male/female clusters at CCC are manifest in depictions of clothing.

with arms are present at every site. Forty-two panels included anthropomorphs that had no arms. In CCC, 65.9% (n=267) of anthropomorphs have legs (42SV1918.8:1). There is no clear pattern of distribution of anthropomorphs with legs (Figure 5.4). There are only two CCC sites which do not have any anthropomorphs with legs: 42SV1911 and 42SV1922. Both sites contain only one anthropomorph. Fifty-five panels have no legs present. Although not every anthropomorph has legs, they are widely distributed all around CCC.

At CCC, 213 anthropomorphs have both arms and legs. This means that 60.7% percent of all anthropomorphs that have either arms or legs (n=351) have both arms and legs. Of the anthropomorphs at CCC, 86.7% have either arms and/or legs.

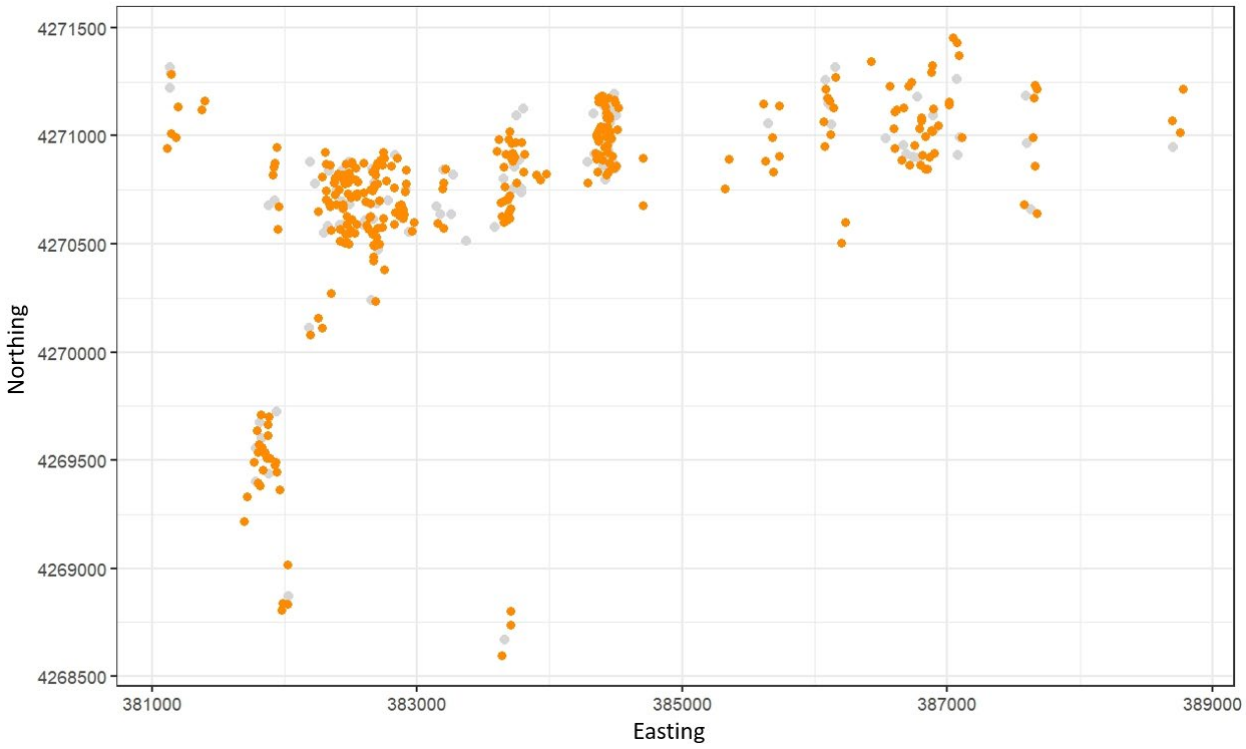

Figure 5.3. Presence of arms at CCC.

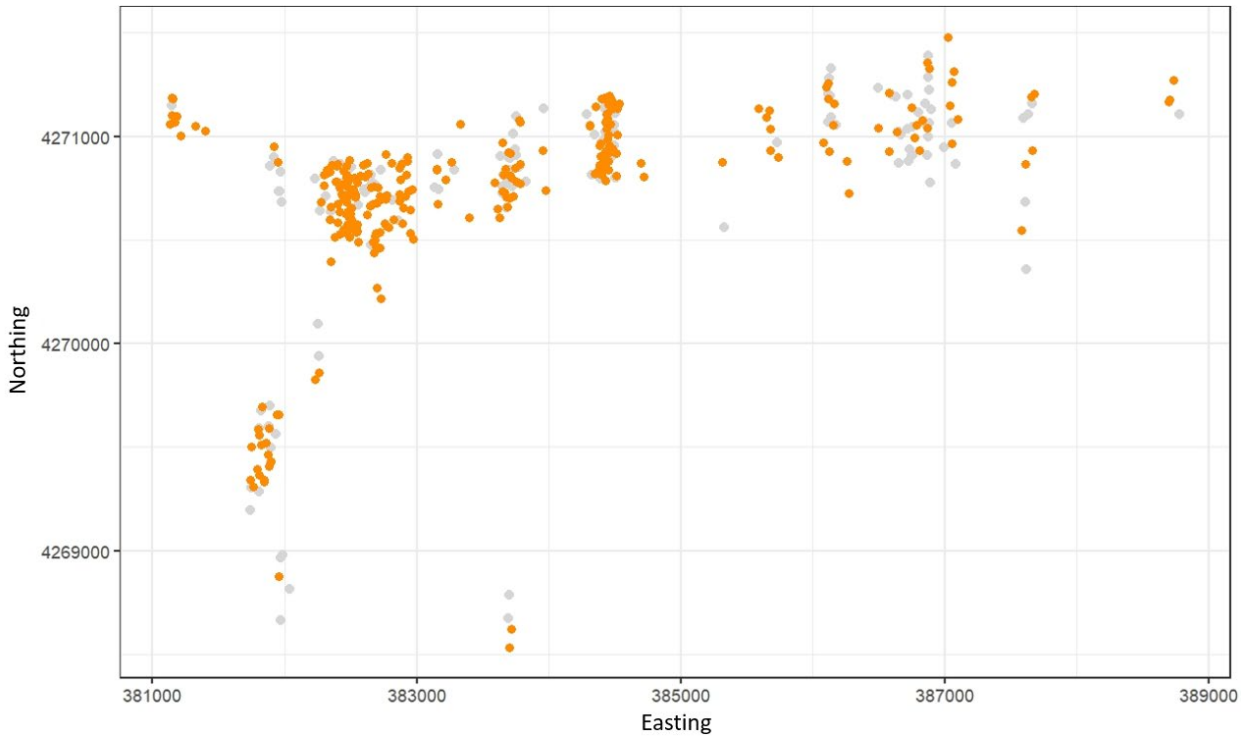

Figure 5.4. Presence of legs at CCC.

Ams and Legs at GSENM

At GSENM, 62.3% (n=48) of all anthropomorphs have arms (42GA6817.1:1). Arms are widely distributed around the region without any clear pattern (Figure 5.5). They are present at every site, although they do not appear on panels 42GA1440.4, 42GA5811.2, or 42GA5811.4.

Of the anthropomorphs at GSENM, 40.3% (n=31) of all anthropomorphs have legs (42GA5826.5:1). Only sites 42GA5811 (four anthropomorphs) and 42GA5814 (three anthropomorphs) are sites where no anthropomorphs have legs, and nine panels do not have any legs. Legs are otherwise widely distributed around GSENM, with no visual patterns (Figure 5.6).

Twenty-three anthropomorphs have both arms and legs. This means that 41.1% percent of all anthropomorphs that have either arms or legs (n=56) have both arms and legs. Of all anthropomorphs at GSENM, 72.7% have either arms and/or legs.

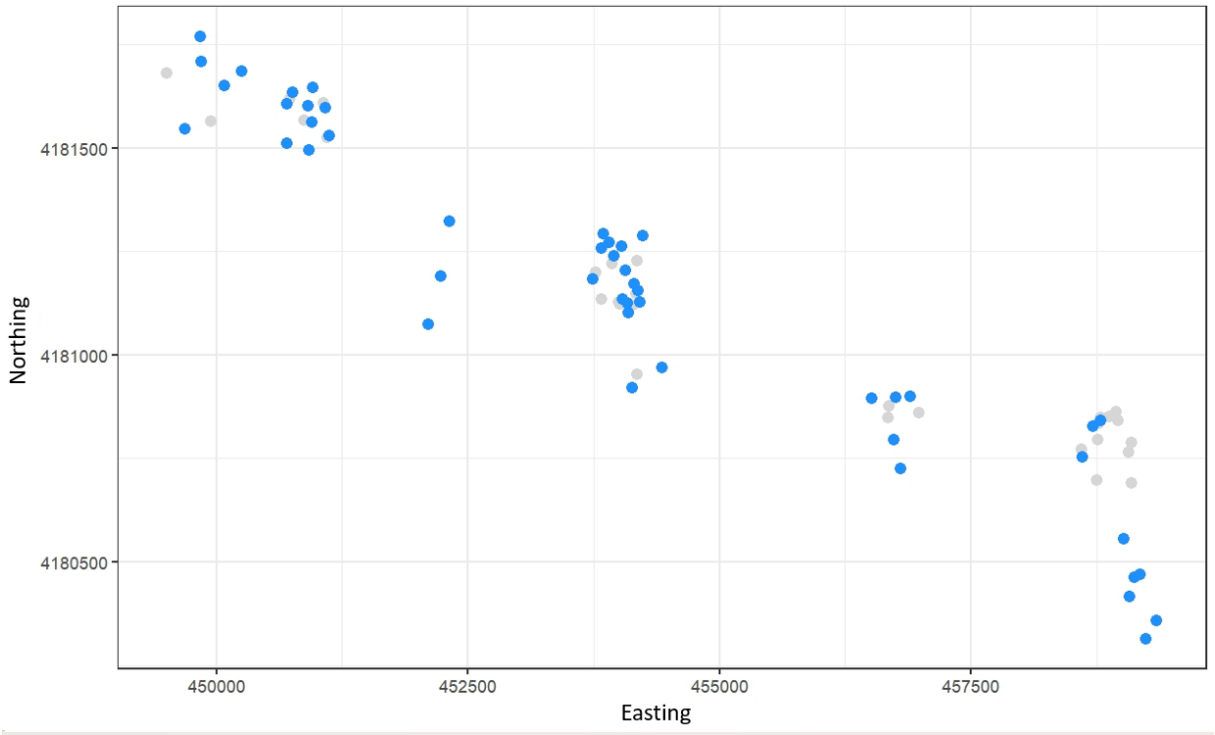

Figure 5.5. Presence of arms at GSENM.

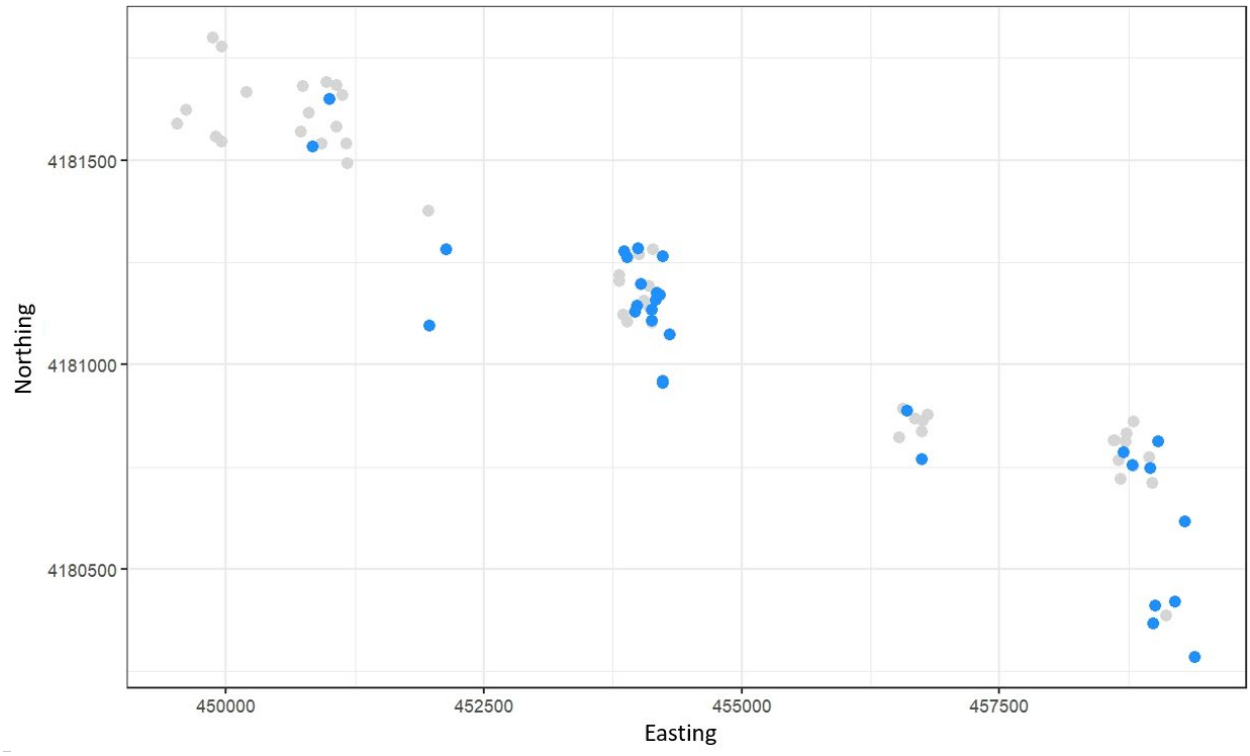

Figure 5.6. Presence of legs at GSENM.

Head Morphology

This section begins with a table comparing counts and percents of every head shape at CCC and GSENM. I then focus on head shape distribution by region, starting with CCC, followed by GSENM. I first look at the distribution of all head shapes together, and then each head shape individually.

Table 5.3. Counts and percentages of head shapes at CCC and GSENM.

Head Morphology	CCC Counts	CCC Percentages	GSENM Counts	GSENM Percentages
Bucket	90	22.2	7	9.1
Circular/Oval	65	15.6	26	34
Square/Rectangular	63	16	8	10.4
Irregular	48	11.9	6	7.8
Thumb	44	10.9	18	23.4
Stick	23	5.7	0	0
Inverted Thumb	19	4.7	0	0
Absent	15	3.7	7	9.1
"Other"	13	3.2	1	1.3
Inverted Bucket	9	2.2	0	0
Inverted Triangle	9	2.2	3	3.9
Triangle	5	1.2	1	1.3
Implied	2	0.5	0	0

Heads at CCC

Anthropomorphs are heavily concentrated on the west end of CCC and relatively sparse on the east side. This is due to several sites with dense concentrations of anthropomorphs (such as 42SV1928) as well as the presence of sites along Mill Creek to the south. Figure 5.7 shows all

head shapes in the region. Figure 5.8 reflects that distribution and reveals patterns about individual head shapes, including the first three most common head shapes: *bucket*,

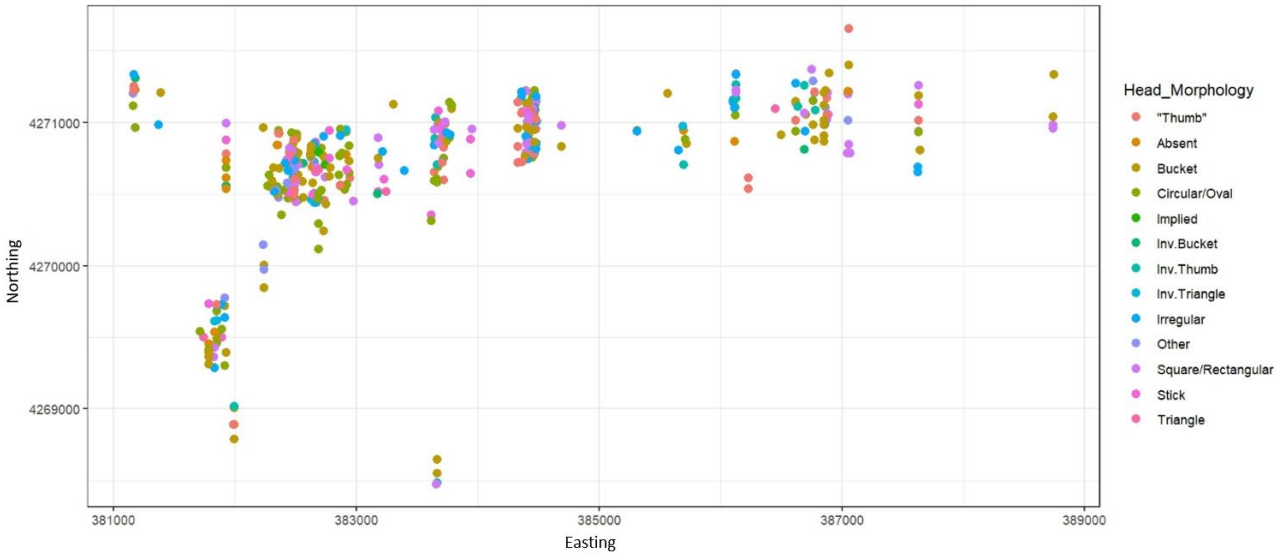

Figure 5.7. Distribution of the head shapes of every anthropomorph across CCC.

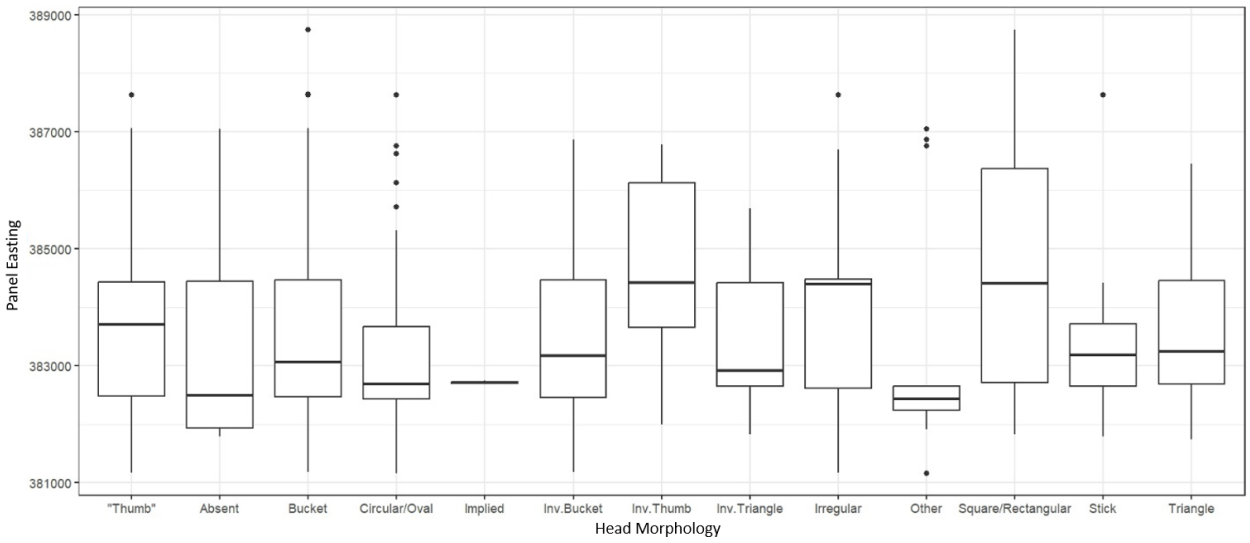

Figure 5.8. East-west distribution of each head shape at CCC.

circular/oval, and *square/rectangular*, respectively.[14] Bucket heads are distributed proportional to the overall distribution of anthropomorphs. Circular/oval heads are most heavily concentrated to the West but include many outliers on the east side. Square/rectangular heads are concentrated most in the middle, but they are distributed evenly across the length of the canyon.

The box plot reveals patterns in another three head shapes. *Inverted thumb* heads are concentrated in the center of the canyon, rather than the west side. With only a few outliers, *"other"* heads are concntrated closely in one area on the west side of the canyon. This suggests that head morphology in all other areas may have included highly-prescribed design forms. *Stick* heads also are notable for being not just concentrated but (with one exception) exclusively found upstream on the west side of the canyon.

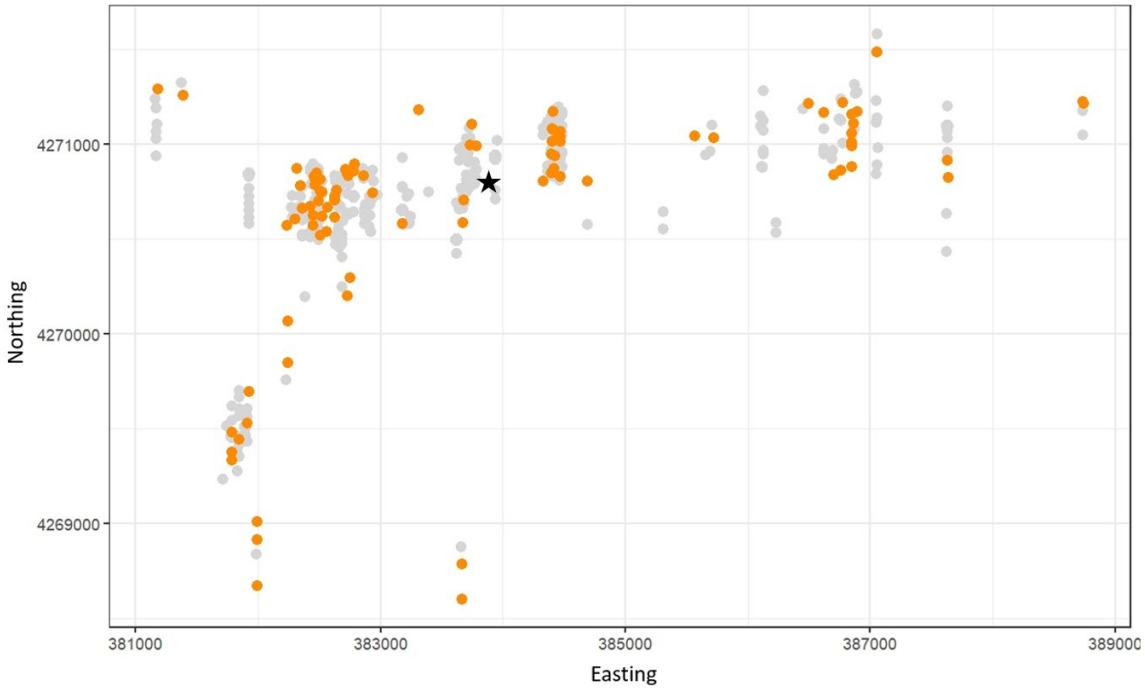

Figure 5.9. Bucket heads at CCC.

[14] The first reference to any design form is italicized to indicate that is a design form. Subsequent mentions are not italicized.

Bucket heads make up 22.2% (n=90) of heads at CCC, more than any other shape (42SV1914.26:1). Their distribution is random across the canyon, with depictions at the sites furthest North, South, East, and West at CCC as well as along Mill Creek (Figure 5.9). East of 384000 E, none of the southern-most sites have bucket heads. They are small sites, but their absence is noticeable. There are not any clear visual distributional patterns of this type of head at CCC.

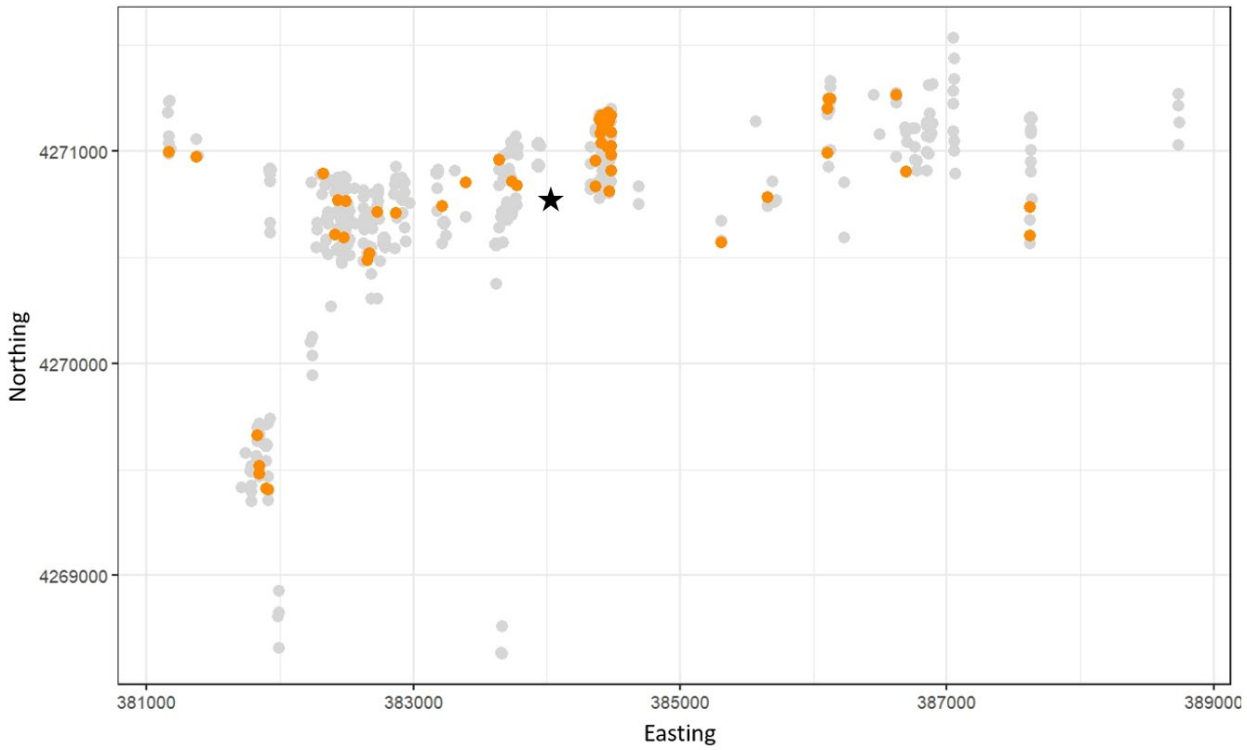

Figure 5.10. Irregular heads at CCC.

Irregular heads make up 11.9% (n=48) of those recorded at CCC (42SV1928.B16:1). The irregular label means that these head shapes do not have bilateral symmetry, unlike the "other" head shape. There are occurrences of between one and four irregular heads across the entire canyon (Figure 5.10). There is a large concentration of 17 irregular heads at 42SV1918, as well as nine at 42SV1928. Irregular heads are found across most of the canyon, east-west, and there does not appear to be a clear visual pattern to their distribution.

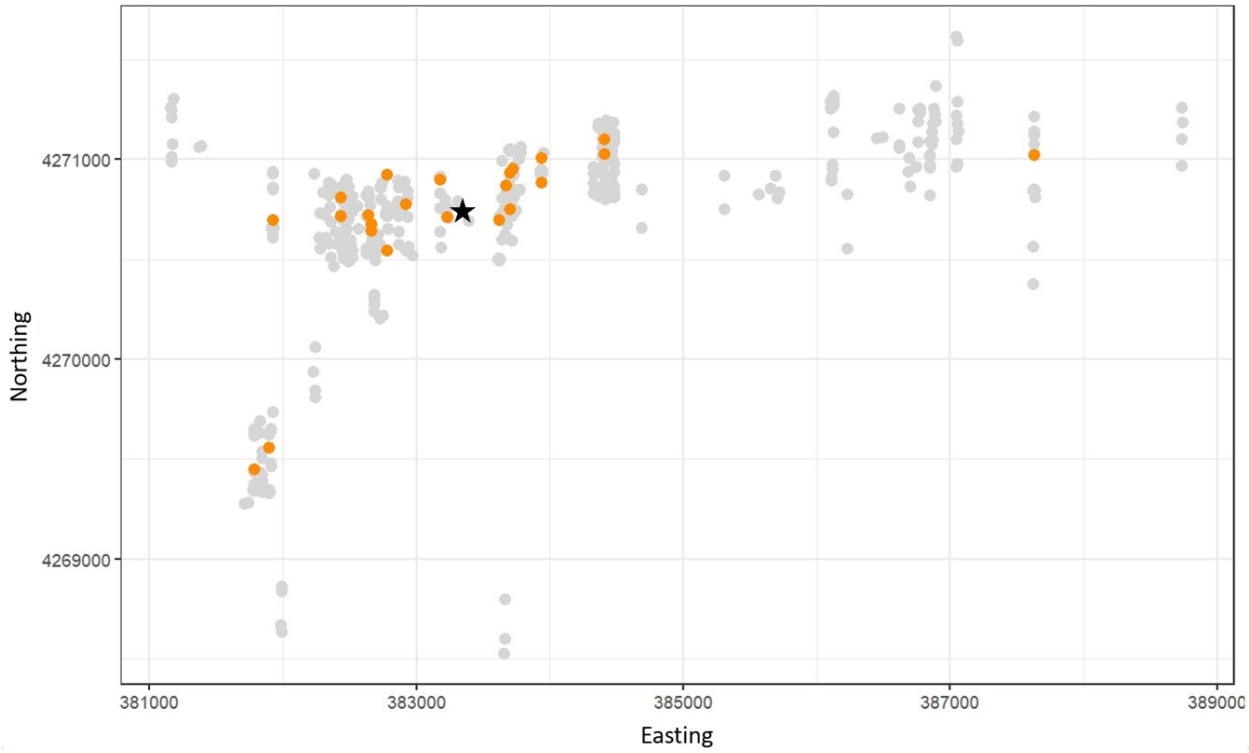

Figure 5.11. Stick heads at CCC.

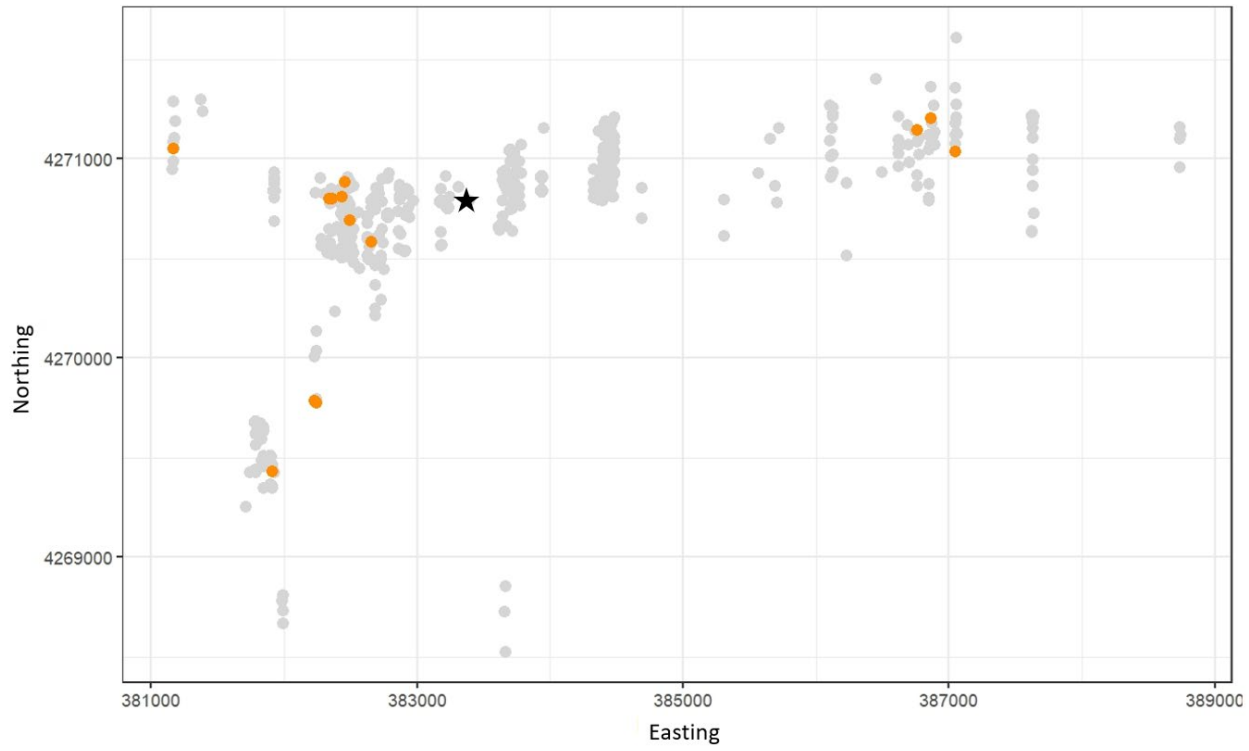

Figure 5.12. “Other” heads at CCC.

Of the CCC anthropomorphs, 5.7% (n=23) had stick heads (42SV1925.A2:1). There is only one stick head east of 383500 E and 387500 E, although these sites have relatively fewer anthropomorphs than those west of 383500 E (Figure 5.11). There are two stick heads found along Mill Creek, though all other stick heads are further north. At CCC there is a pattern of stick head anthropomorphs being mainly found upstream (west), with only a few exceptions.

"Other" heads include symmetrical heads which do not match any of the other head morphological design forms (42SV1929.B10:1). Most "other" heads appear similar to one of the other head categories such as bucket or square, but with slight differences in the angles, or a mixture of curved and angular features. "Other" head shapes account for 3.2% of the total anthropomorphs (n=13). No two "other" heads were found together on the same panel, although site 42SV1928 contains a cluster of six "other" heads, and site 42SV1932 has two "other" heads. There is no pattern in spatial distribution, but most heads categorized as "other" are found at the sites most densely populated with anthropomorphs (Figure 5.12). The one exception to this is site 42SV1932, which has four anthropomorphs, two of which have bucket heads, and two of which have "other" heads. The site is found along Mill Creek rather than CCC, and its panels are stylistic outliers for the region. Panel 42SV1932.4 features very strange, wavy appendages, while panel 42SV1932.6 features a single anthropomorph with different head and body morphology from the rest of the canyon.

There are two *implied* heads in CCC (Figure 5.13). Both are found at site 42SV1928, which has more anthropomorphs than any other site at the canyon (111 total, or over ¼ of all anthropomorphs in the canyon). Implied heads are different from absent heads because the anthropomorphs lack an outlined or filled-in head but have other manifestations of a head, such as facial features or jewelry. Absent heads have nothing attached to the top of the body, and no

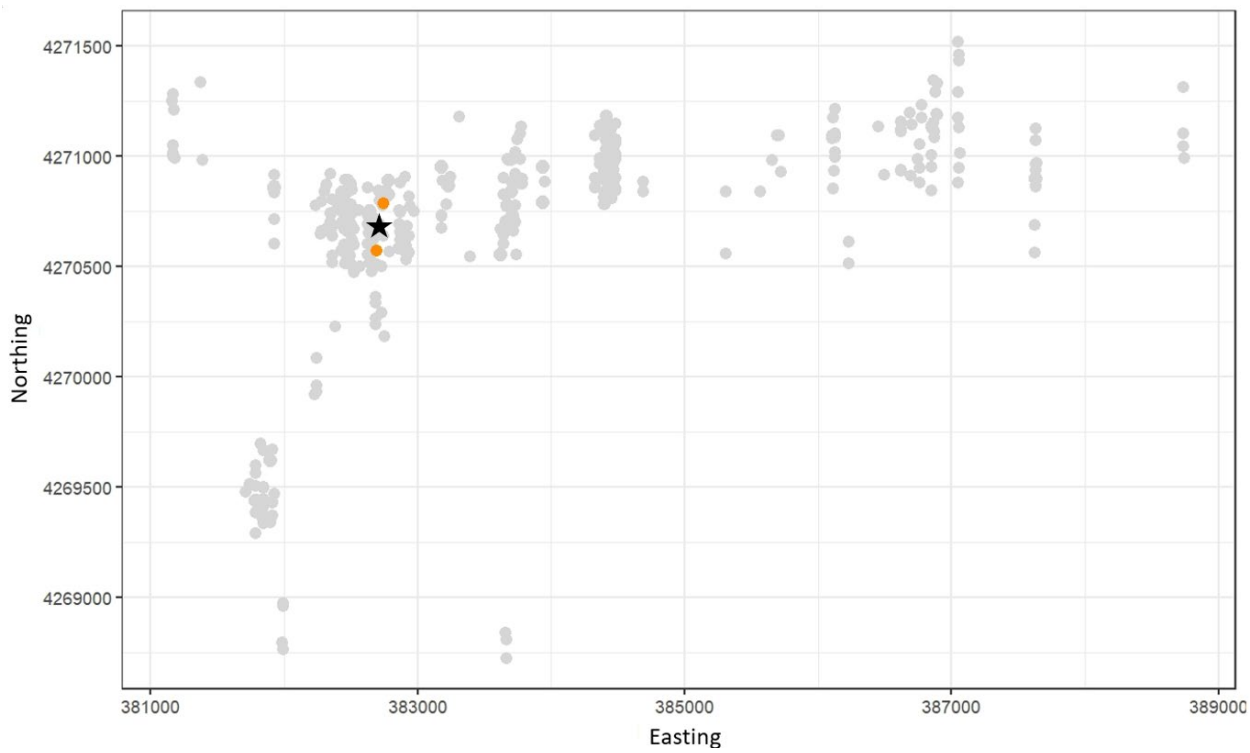

Figure 5.13. Implied heads at CCC.

indication that there is a head at all. The CCC implied heads both have headdresses that appear to be sitting on heads.

Heads at GSENM

GSENM has far fewer anthropomorphs than CCC, and they cluster in a few distinct sites (Figure 5.14). The largest concentration is a cluster of 23 at site 42GA1440, located at 454000 E. There are 28 anthropomorphs west of this site, and 31 anthropomorphs east of it.[15] Patterns in the distribution of a few head shapes are obvious; however, these patterns may be less significant

[15] The sites at GSENM do not run directly east-west, but rather run from the southeast to the northwest. For the sake of simplicity, I describe distribution here in terms of easting and westing.

than those at CCC because there are so few anthropomorphs. Clusters of design forms at just a few panels (for example, there is a group of six anthropomorphs with absent heads at

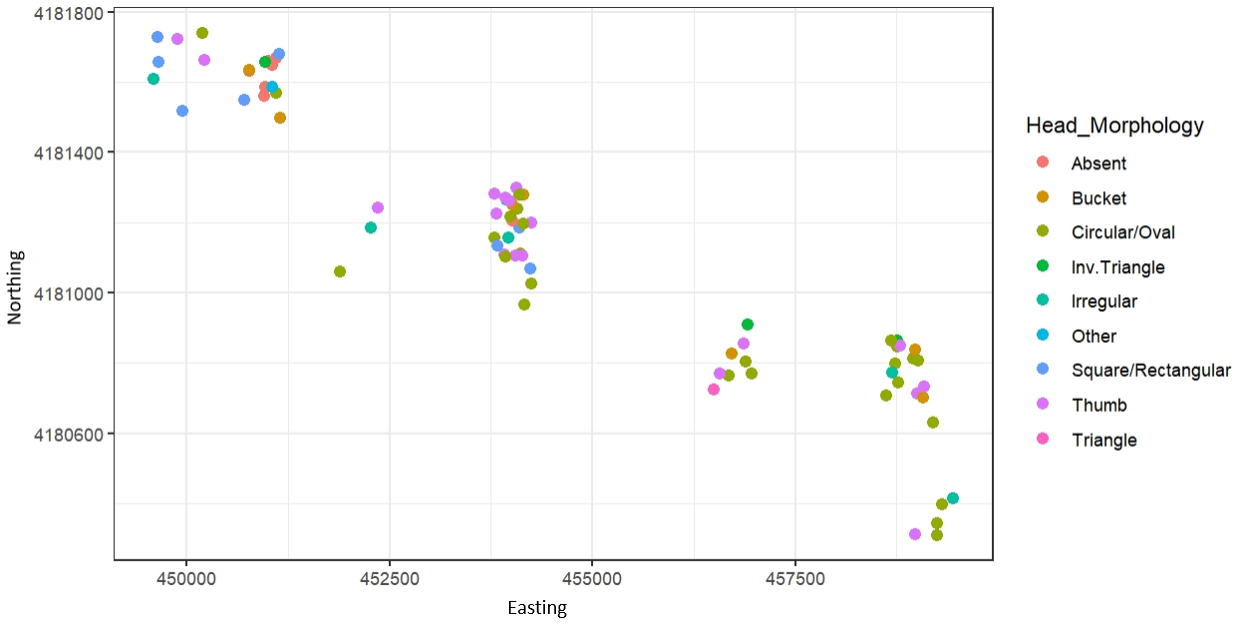

Figure 5.14. Distribution of the head shapes of every anthropomorph across GSENM.

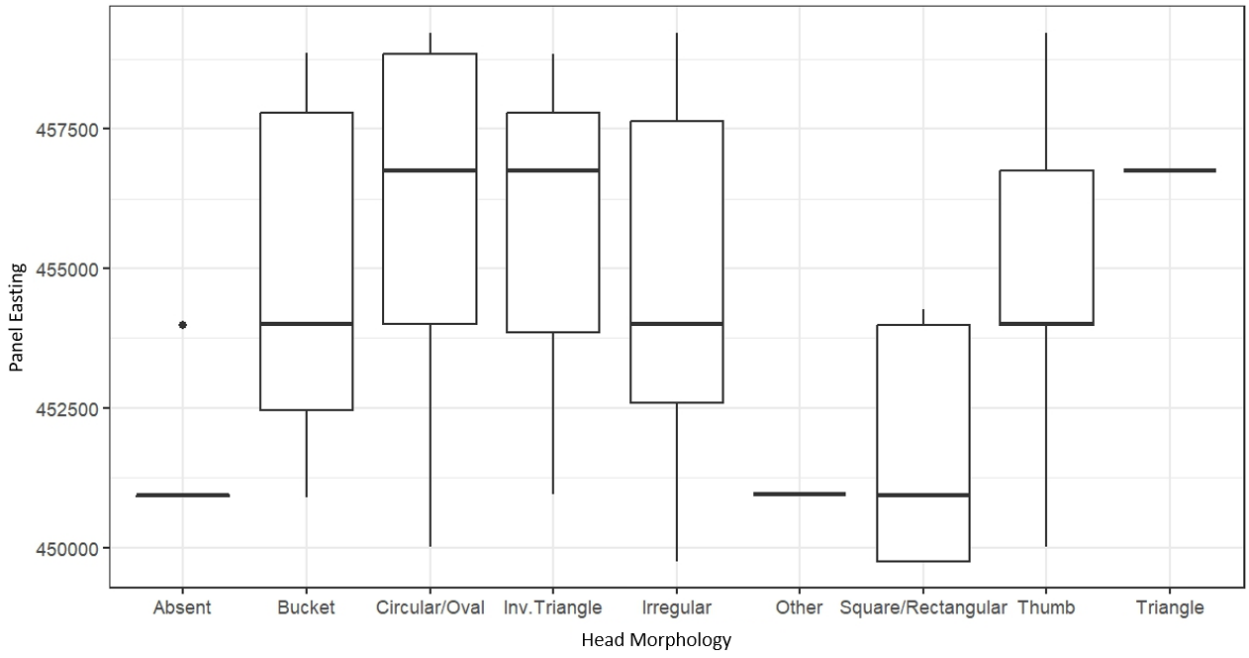

Figure 5.15. East-west distribution of each head shape at GSENM.

42GA1437.1B and 42GA1437.1D) can look hugely impactful but may represent the preferences of a single artist rather than a regional trend.

The most common head shape at GSENM is circular/oval, and 75% of these heads are located east of 454000 E (Figure 5.15). Thumb shapes are the second most common. They are distributed across the entire region, but 50% of these heads are clustered within a small area east of 454000 E. In fact, 50-75% of most anthropomorph head types are on the east side of GSENM. Although most head shapes can be found in small numbers across the entire region. Absent, "other," and square/rectangular heads are the only types which are only found on the western half of GSENM. Absent and triangle-shaped heads are both extremely rare and therefore the stark contrast that the box plot shows compared to other head shapes is not significant.

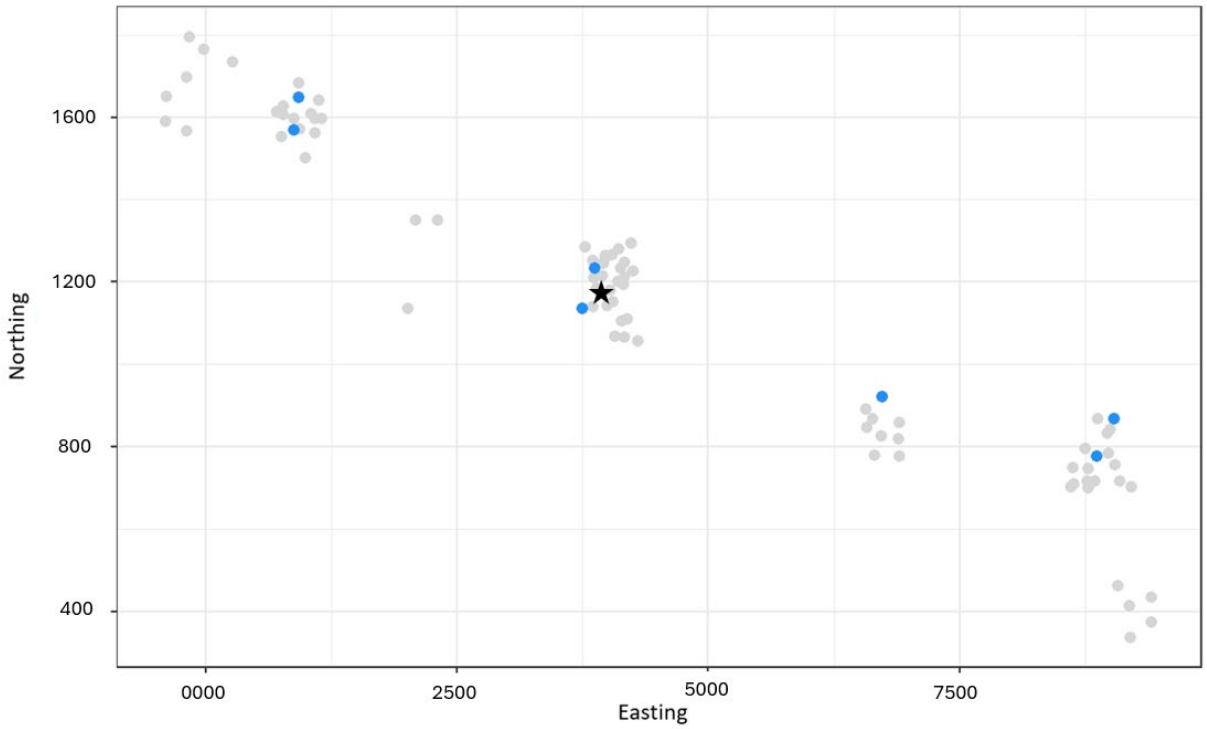

Figure 5.16. Bucket heads at GSENM.

There are seven bucket heads at GSENM, making up 9.1% of all anthropomorphs identified in this region (Figure 5.16). Despite these lower numbers, this plot was included to compare with the bucket head plot from CCC. The bucket heads occur alone or in pairs at sites, and each site includes other head shapes as well. None of the bucket-headed anthropomorphs are found on panels with other bucket-headed anthropomorphs. Rather, they are found with different design forms, or else alone on a panel, as in panel 42GA1437.3:1. There is no clear pattern to bucket head distribution, although they do not tend to cluster together on individual panels.

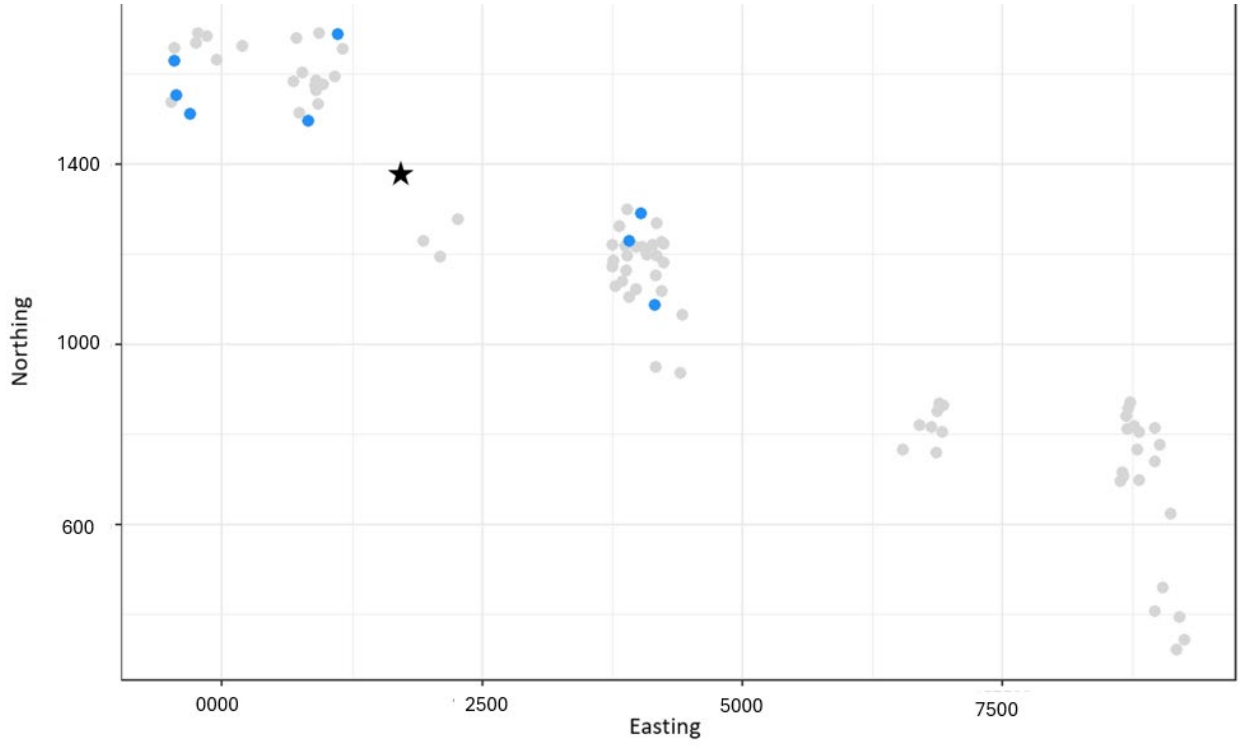

Figure 5.17. Square/Rectangular heads at GSENM.

Square/rectangular heads account for 10.4% (n=8) of all heads in GSENM (42GA5811.2:1). They only occur on the Northwest side of the canyon and do not occur East of 455000 E (Figure 5.17). This is the only visual pattern for the distribution of these heads. They

occur isolated on panels (42GA5811.2) as well as in conjunction with a variety of other heads shapes (42GA1440.2A), and with other square/rectangular heads (42GA1427.1D).

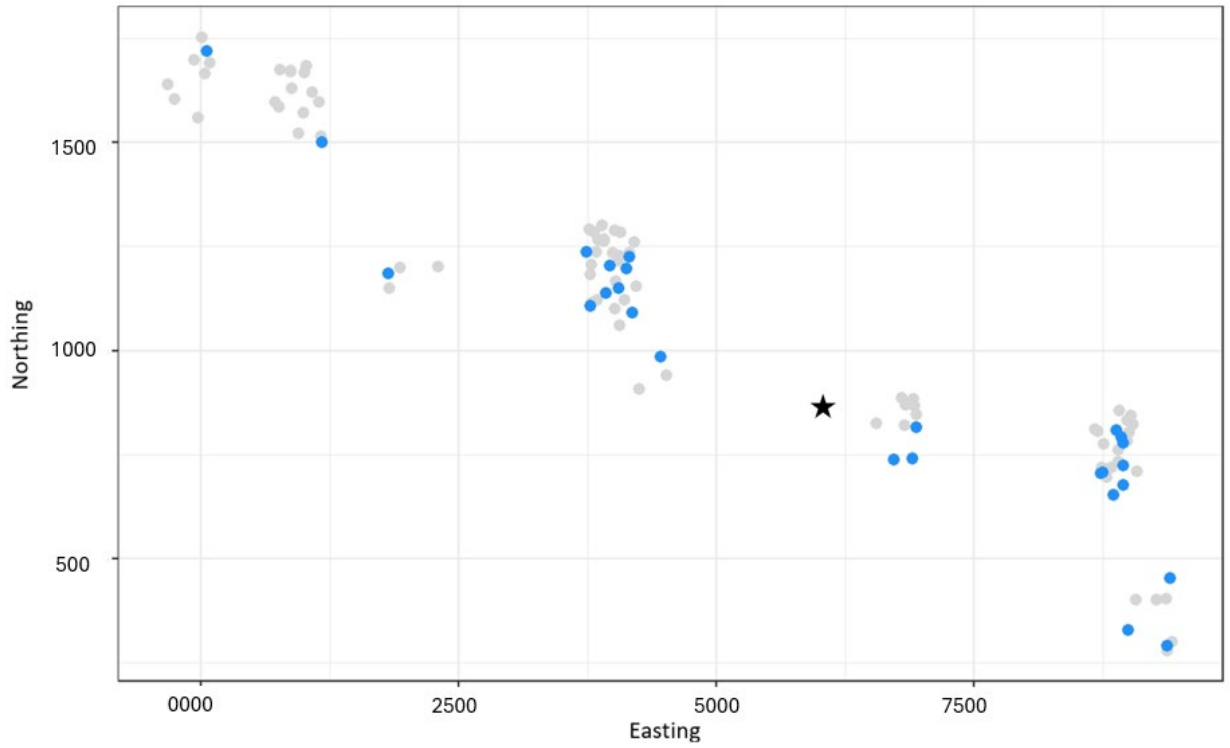

Figure 5.18. Circular/Oval heads at GSENM.

Circular/oval heads are by far the most common at GSENM, accounting for 33.8% (n=26) of all anthropomorph heads in the region(42GA1440.1:3). They are ubiquitous across the canyon with a noticeable gap at site 42GA1437 because of a large cluster of absent heads (Figure 5.18). There are large clusters of seven circular/oval heads each at both sites 42GA1440 and 42GA5833, although there are generally only 1-2 circular/oval heads per individual panel. Around 75% of these anthropomorphs are found east of 454000, although they are present in small numbers across the region.

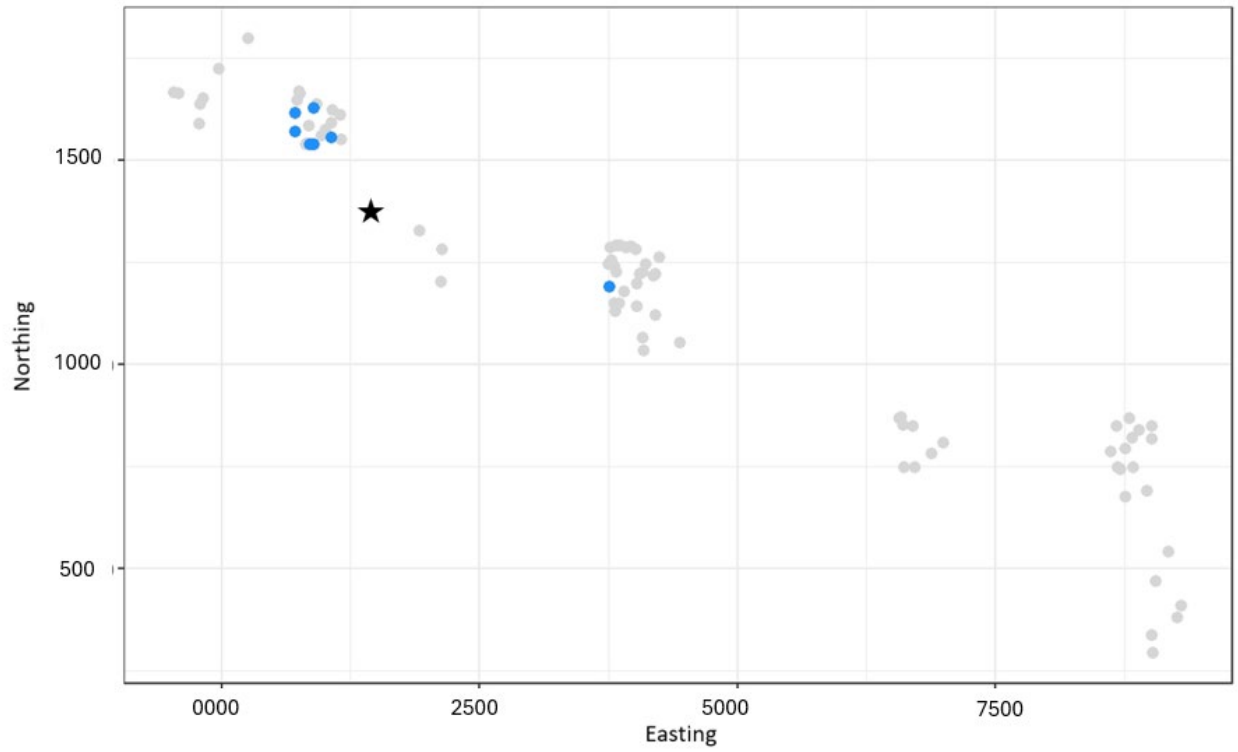

Figure 5.19. Absent heads at GSENM.

Of the anthropomorphs at GSENM, 9.1% (n=7) are lacking present or implied heads (42GA1440.3:3). One of these anthropomorphs with an absent head is found at site 42GS1440, while the other six are located at site 42GA1437 (Figure 5.19). Panel 42GA1437.1B and Panel 42GA1427.1D both feature a line of anthropomorphs standing next to one another, several of which do not have heads. The other headless anthropomorphs are scattered by themselves.

The following head shapes are not present at GSENM: Stick, Inverted Thumb, Inverted Bucket, and Implied (Figure 5.20). They make up the following percents of CCC anthropomorphs, respectively: 5.7, 4.7, 2.2, 0.5. The fact that none of these are represented at GSENM is a departure from the CCC style and evidence that while the two regions had many similarities, they also had notable stylistic differences.

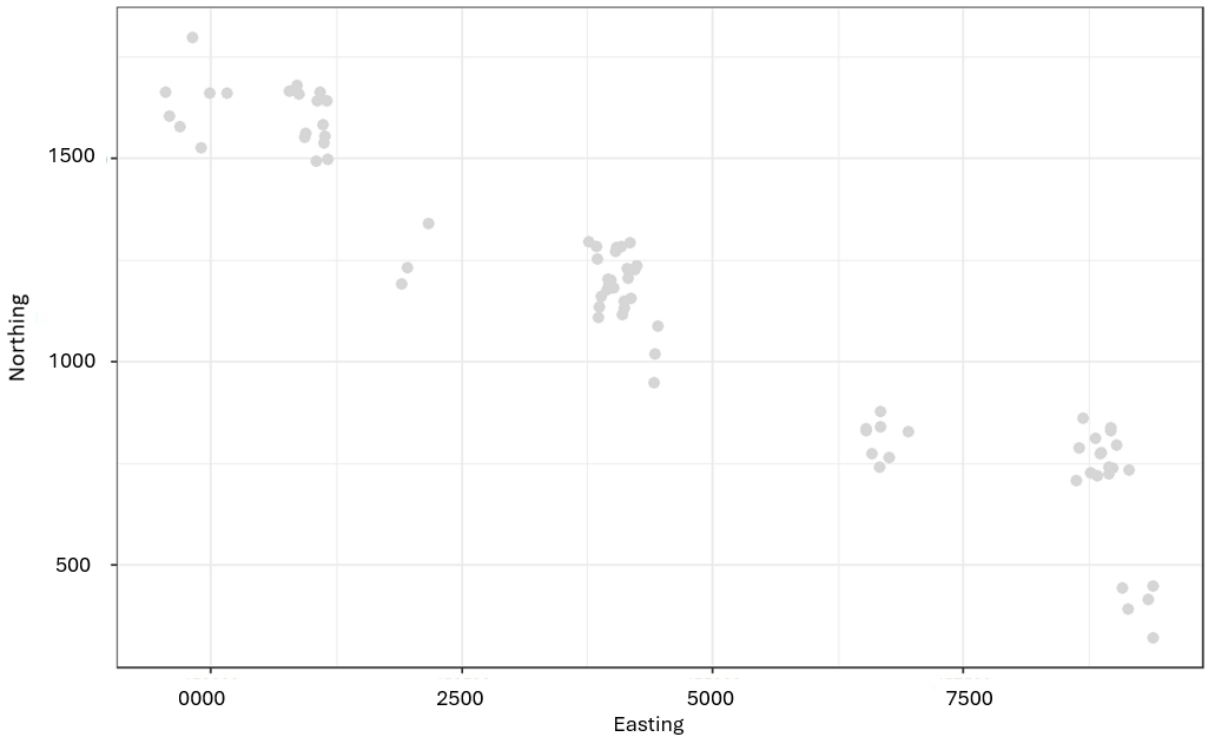

Figure 5.20. Stick, inverted thumb, inverted bucket, implied heads at GSENM.

Comparison of Head Shapes

Head shape accounts for the largest morphological variation between CCC and GSENM. Out of 13 head shapes, there are four which are not present at GSE: inverted thumb, inverted bucket, stick, and implied. Although implied heads account for only 0.5% (n=2) and inverted buckets only account for 2.2% (n=9) of the variation at CCC, stick and inverted thumb and accounts for a sizable amount of the variation—5.68% (n=23) and 4.69% (n=19), respectively. Their absence at GSENM represents a distinct difference between the two regions and a marker of stylistic difference.

In addition to missing head shapes, the distribution of head shapes is different between CCC and GSE. Most notably, bucket heads are overwhelmingly the most common shape at CCC (22.2%, n=90), while they account for only 9.1% (n=7) of heads at GSENM. Several head

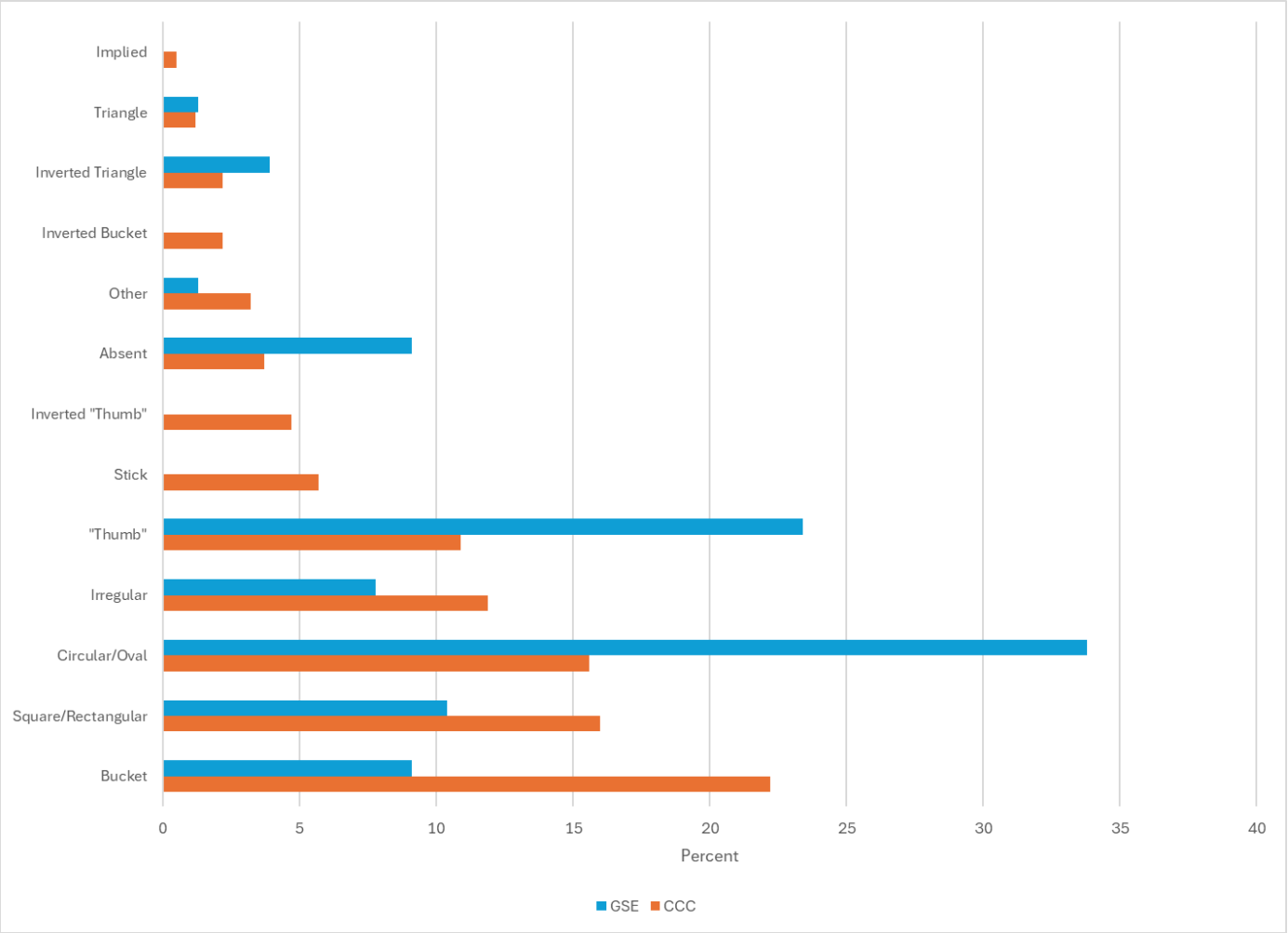

Figure 5.21. Bar graph comparing percents of each head type at CCC and GSENM.

shapes account for almost twice the percent of anthropomorphs at GSE than at CCC. At CCC 16% (n=65) of heads are circular/oval contrasted with 34% (n=26) at GSENM. At GSENM, 23% (n=18) of heads are thumb-shaped as opposed to 10.9% (n=44) at CCC. Both sites share the same few uncommon shapes (inverted triangle and triangle), implying they were present but possible outliers across the Fremont world. A few “other" heads which did not fit into any design form were present at each site.

Body Morphology

Table 5.4. Counts and percentages of head shapes at CCC and GSENM.

Body Morphology	CCC Counts	CCC Percentages	GSENM Counts	GSENM Percentages
Bucket	94	23.2	21	27.3
Bucket, Rectangular Base	59	14.6	11	14.3
Rectangular	55	13.6	3	3.9
Triangle	54	13.3	6	7.8
Bucket, Flared Base	45	11.1	20	26
"Other"	44	10.9	7	9.1
Stick	38	9.4	5	6.5
Circular	8	2	1	1.3
Oval	7	1.7	2	2.6
Absent	1	0.2	1	1.3

Bodies at CCC

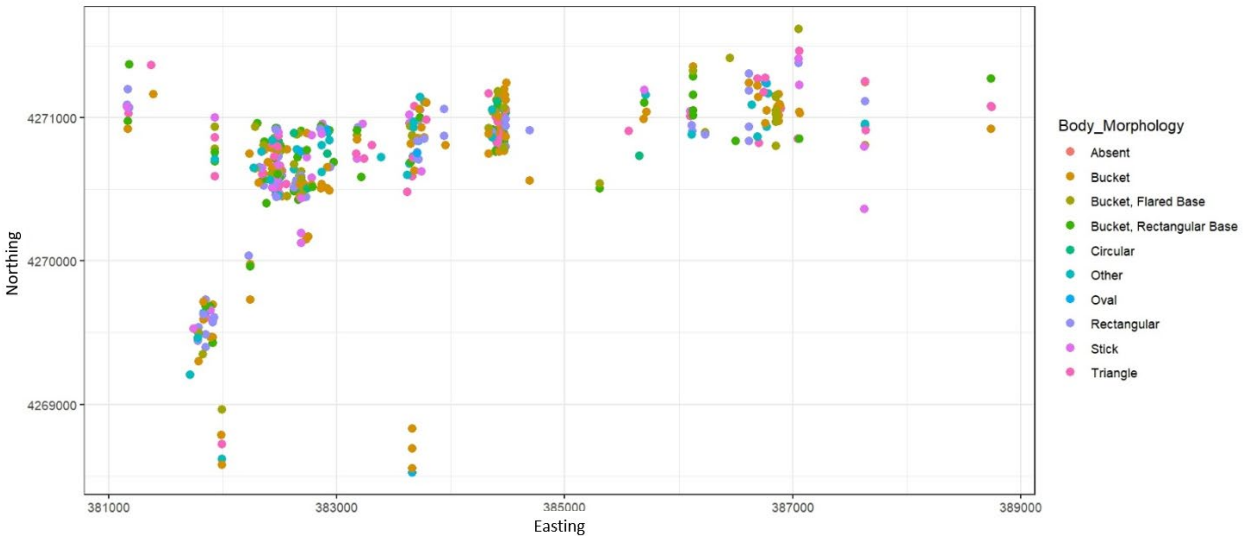

Figure 5.22. Distribution of each body shape across CCC.

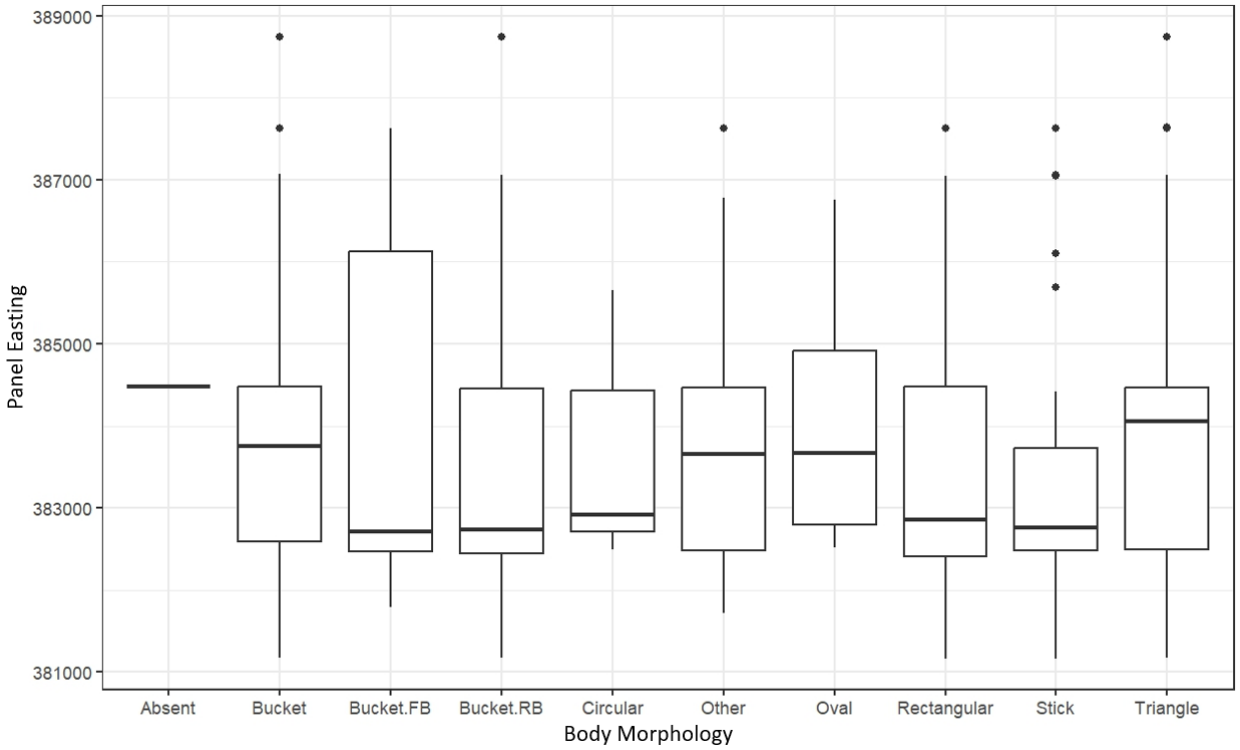

Figure 5.23. East-west distribution of each body shape at CCC.

Compared to the east-west distribution of CCC head shapes (fig. X), body shapes are distributed with much less variability. This is in part due to a smaller number of body shapes compared to head shapes (10 vs. 13), but also due to a more visually random spread of body shapes. All shapes aside from *bucket bodies with a flared base* have 75% of their anthropomorphs distributed west of 385000. Bucket bodies with a flared base are still heavily weighted to the west but have a wider distribution. *Stick* bodies are all west of 385000 with only four outliers, while *circular* bodies were all identified between 382500 E and 386000 E. Because there is only one *absent*-bodied anthropomorph at CCC, the box plot does not reveal any patterns in this regard.

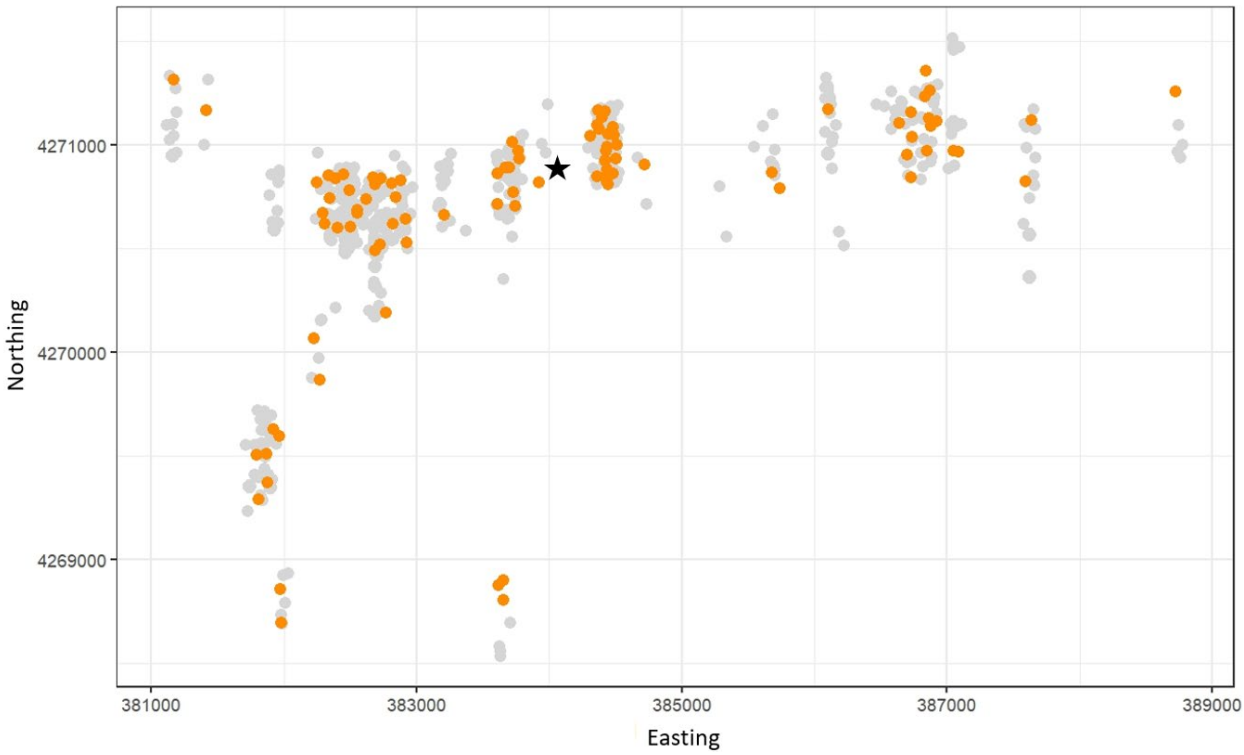

Figure 5.24. Bucket bodies at CCC.

Of the anthropomorph bodies at CCC, 23.2% (n=94) are *bucket*-shaped (42SV1926.17:1). These bucket bodies are found all along CCC from the sites furthest East to furthest West, as well as South along Mill Creek. There is no visually obvious distribution pattern as this body shape is omnipresent in the CCC region (Figure 5.24).

At CCC, 9.4% of anthropomorphs (n=38) have stick bodies (42SV1928.3a:1). The stick bodies are heavily weighted on the west side of the canyon, similar to stick heads (Figure 5.25) The two shapes cluster together, which is demonstrated in the correspondence analysis later in this chapter. Stick bodies appear in small numbers in conjunction with anthropomorphs with a variety of body shapes.

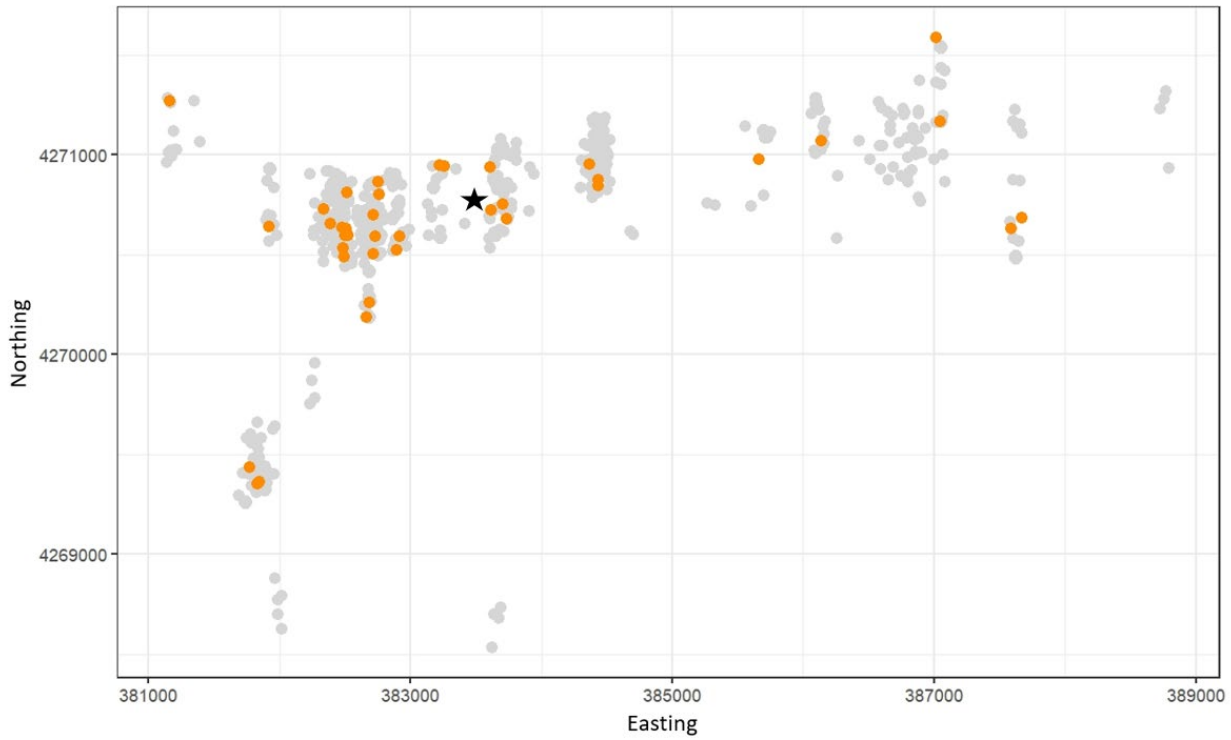

Figure 5.25. Stick bodies at CCC.

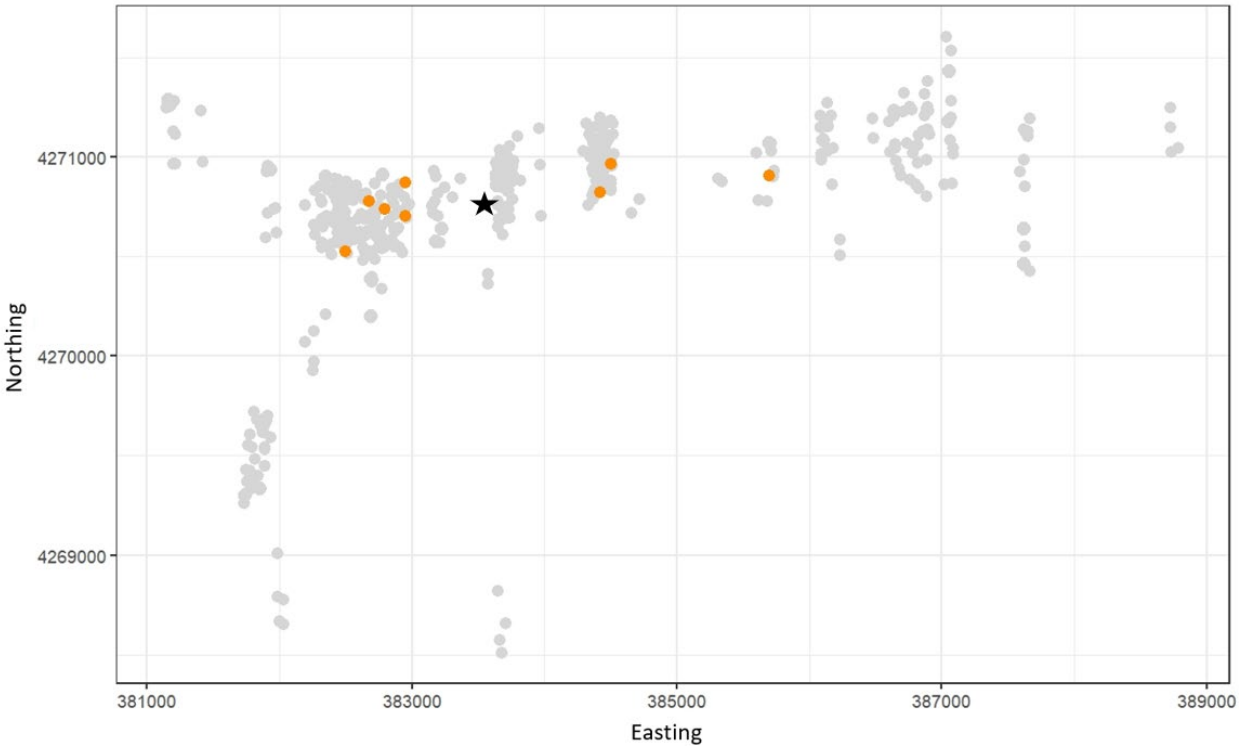

Figure 5.26. Circular bodies at CCC.

Of the anthropomorphs at CCC, 2% (n=8) have circular bodies (42SV1927.B11:1). Sites have between 1-3 circular bodies at them, though each of these circular bodies is on a separate panel. Each of these few depictions only appears in the north central part of the canyon, and do not extend to the extreme east or west (Figure 5.26).

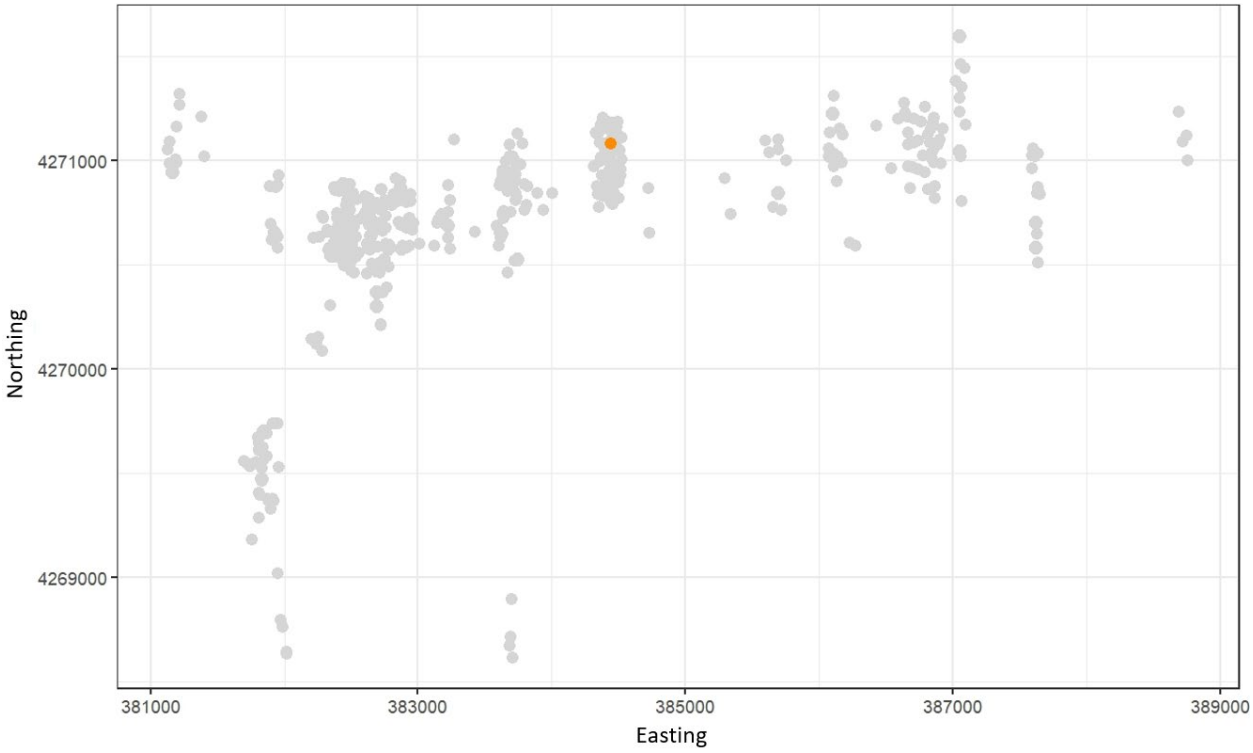

Figure 5.27. Absent bodies at CCC.

CCC has only one figure with an *absent* body (Figure 5.27). It is figure 42SV1928.60:6. This figure is unusual in shape and its design features cannot be easily recognized. This figure is in a row of other anthropomorphs, most of which have feather-like headdresses protruding from their heads. Because this small anthropomorph has the same headdress but no obvious body, it is marked as absent body. One explanation for that is that it may represent a decapitated head held by the central figure in a procession scene. Each of the bent over figures is moving in an orderly, ceremonial way and wearing ceremonial headwear, giving credibility to this theory.

Bodies at GSENM

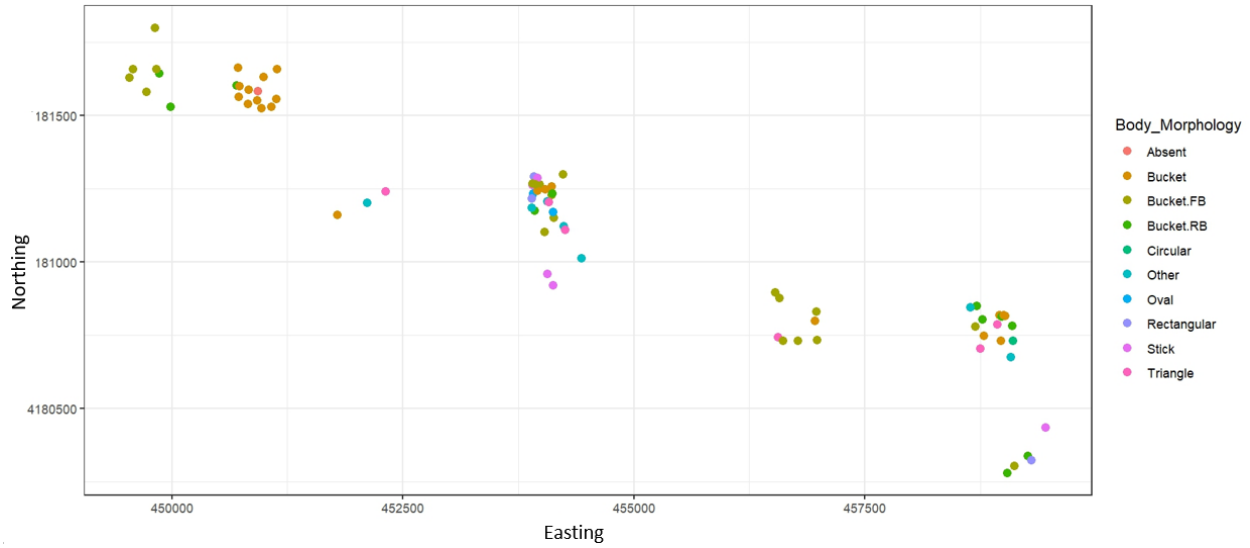

Figure 5.28. Distribution of each body shape across GSENM.

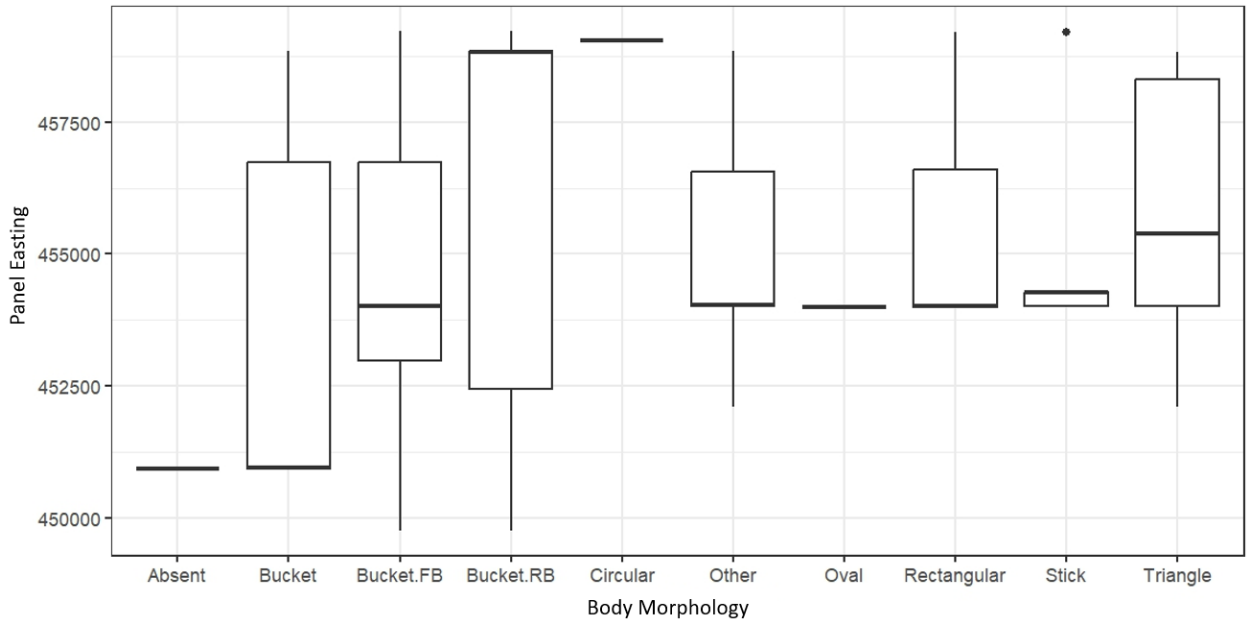

Figure 5.29. East-west distribution of each body shape at GSENM.

The small number of sites at GSENM helps to show patterns in this region clearly, although most design forms do not have high enough numbers to substantiate patterns. There is only one occurrence each of absent and circular bodies at GSENM, and only two ovals (both located at site 42GA1440, the site with the most anthropomorphs). Bucket bodies, bucket bodies with flared bases, and bucket bodies with rectangular bases are all widely distributed through the east, west, and center of the region. Oval, rectangular, stick, triangle, and "other" bodies are all distributed through the center and east parts of the canyon, with little to no representation west of 453750 E.

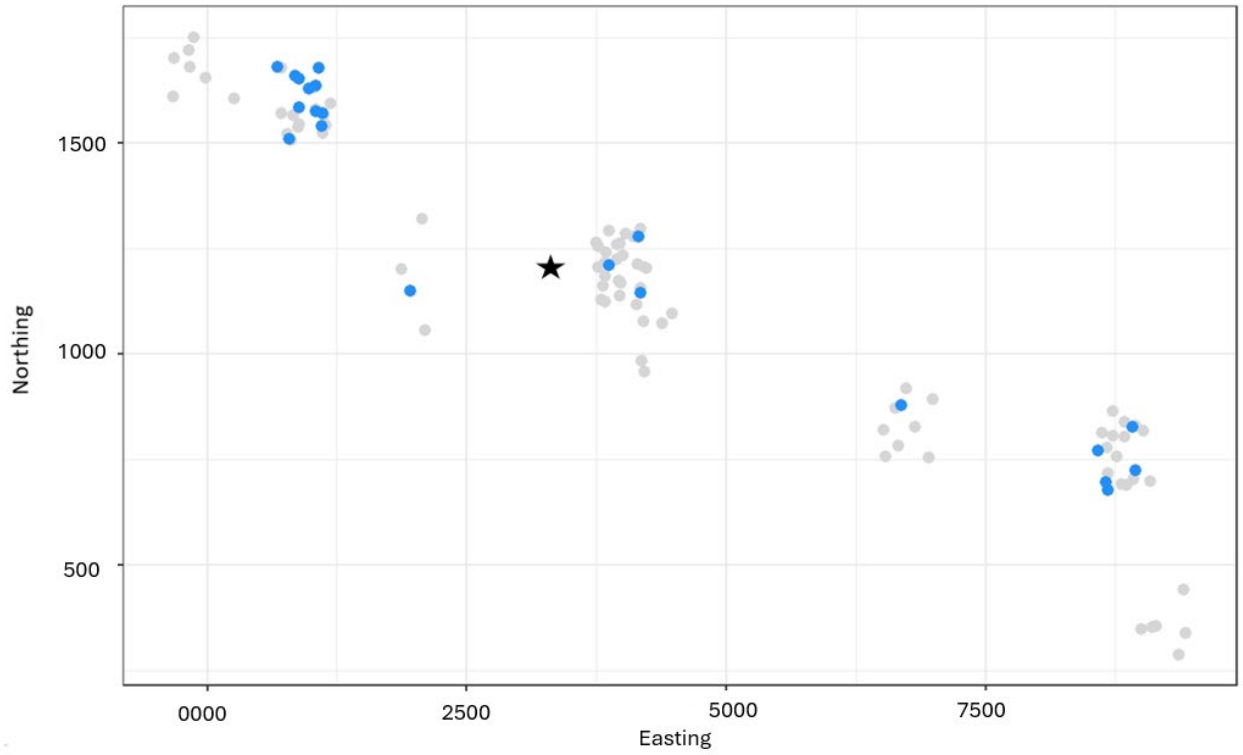

Figure 5.30. Bucket bodies at GSENM.

Anthropomorphs with bucket bodies account for 27.3% (n=21) of all bodies at GSENM (42GA5833.3:6). Visually, their distribution appears random across the entire region (Figure 5.30). The largest cluster of anthropomorphs is a group of 11 figures at site 42GA1437. This site

includes panels 42GA1437.1B and 42GA1437.1D, which are depictions of groups of anthropomorphs laid out in straight lines.

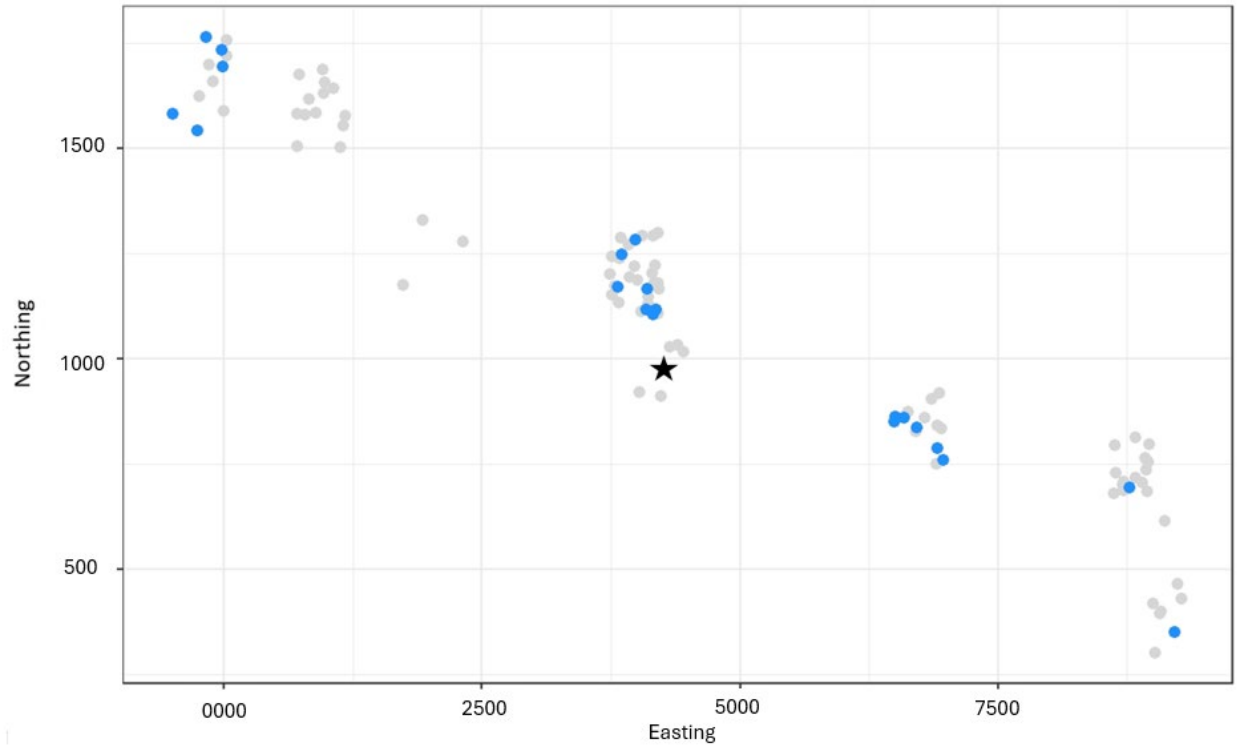

Figure 5.31. Bucket, flared base bodies at GSENM.

Bucket shaped bodies with flared bases make up 26% (n=20) of all anthropomorphs at GSENM (42GA5811.4:1). There are two large clusters of this body shape at sites 42GA1440 and 41GA5855, although this body shape occurs all at the eastern-most and western-most sites, as well (Figure 5.31).

There are 7 “other” shaped bodies at GSENM, accounting for 9.1% of anthropomorphs in the region (42GA1440.2B:3). This shape does not occur at the two western-most sites but appears more sporadically through the center and east of the region, and site 42GS1440 has a group of three “other” bodies (Figure 5.32).

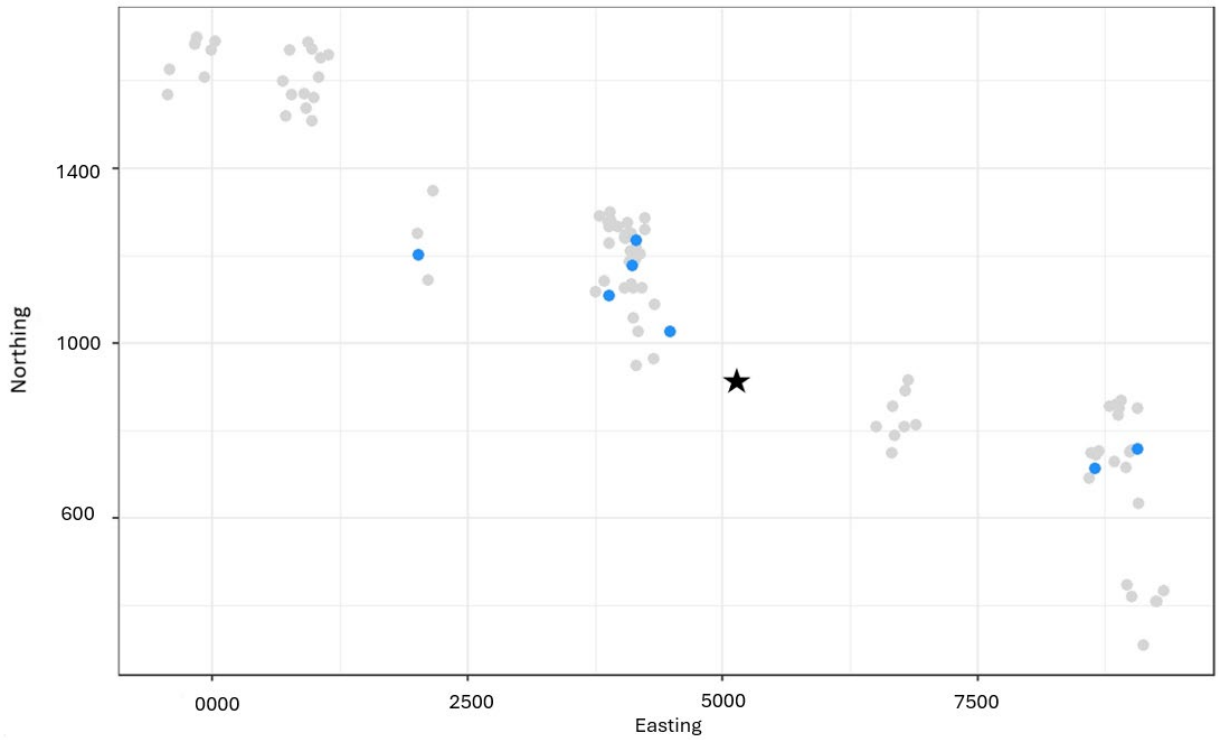

Figure 5.32. “Other” bodies at GSENM.

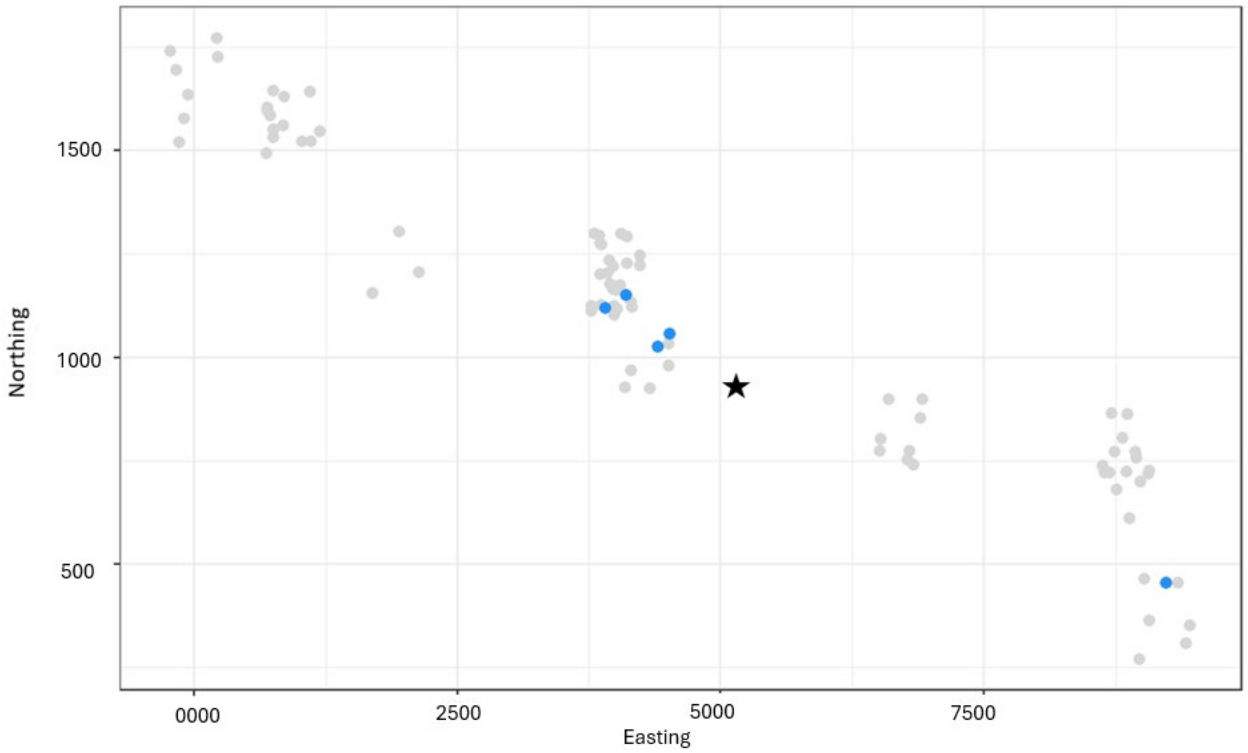

Figure 5.33. Stick bodies at GSENM.

Stick bodies account for 6.5% (n=5) percent of all bodies in GSENM (42GA5826.2:1). This body shape is only found east of 453750 E (Figure 5.33). Two of the stick-bodied anthropomorphs are at site 42GA1440, while another two appear together on panel 42GA1441.1. These two sites are adjacent to one another, forming a cluster of stick bodies. The final stick body is found isolated at the southeast of the survey area at 42GA5826. All stick bodies appear in conjunction with other body shapes.

Comparison of Body Shapes

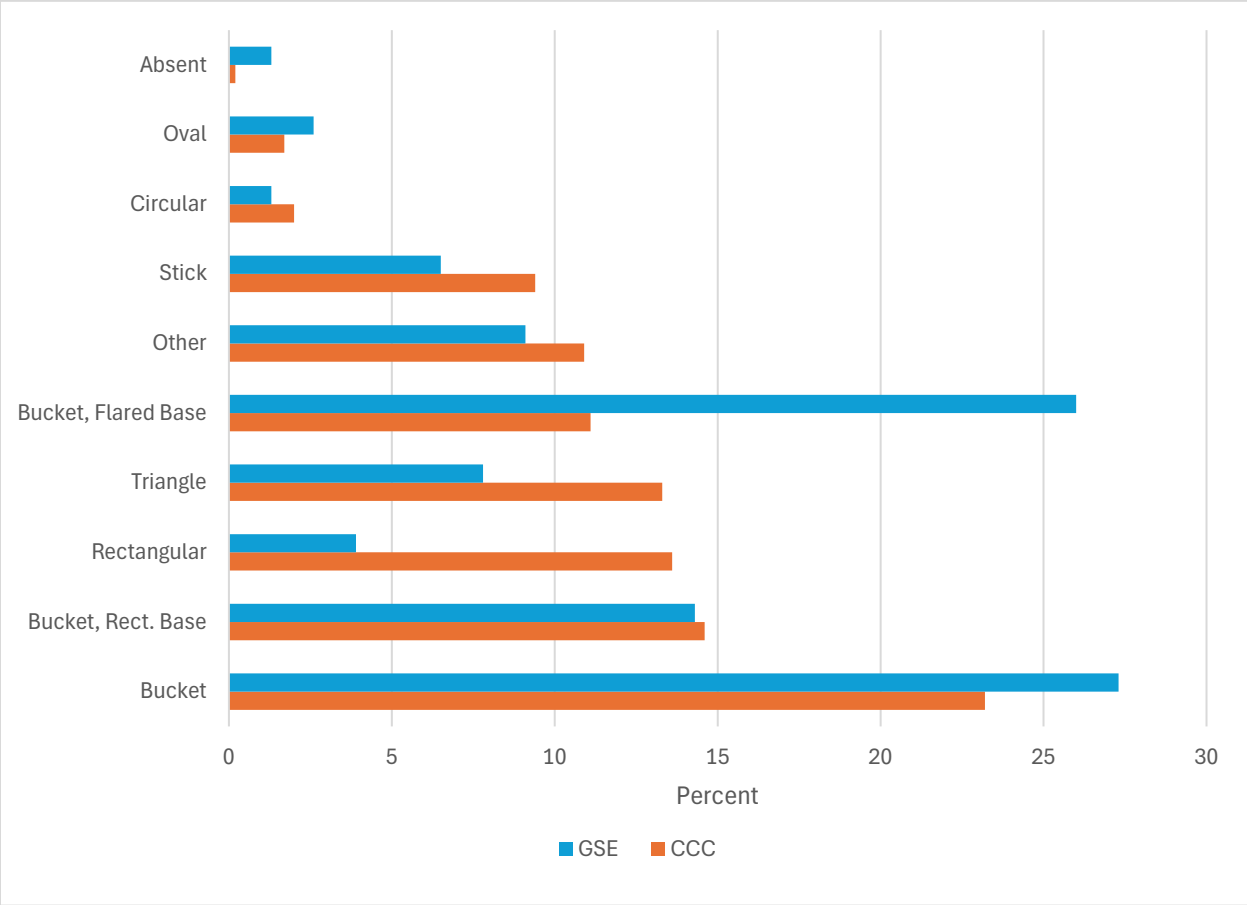

Fig 5.34. Bar graph comparing percents of body types at CCC and GSENM.

The main Fremont body shapes fall into nine design forms and an "other" category, implying less variability across the between these two regions compared to heads. CCC and GSENM contain all the same body shapes, though present in different frequencies. Bucket bodies were the most common form at both CCC (23.2%, n=94) and GSE (27.3%, n=21). Most notably, rectangular bodies accounted for almost four times as many of the anthropomorphs at CCC than GSE (13.6% or n=55 at CCC; 3.9% or n=3 at GSE). At GSE, more than twice the percent of bucket, flared base bodies (23.8% n=20) were present than at CCC (11.1%, n=45).

Correspondence Analysis

Table 5.5. Cross tabulation of heads and bodies which occur together at CCC. The body forms are listed across the first row, while head forms are listed down the first column.

Head Morphology	Other/ Absent	Bucket	Bucket.FB	Bucket.RB	Circle/ Oval	Rectangle	Stick	Triangle
Absent/ Implied	2	5	3	1	1	2	1	1
Bucket	4	32	17	14	2	3	2	16
Circular/Oval	10	11	4	10	4	7	12	7
Inv.Bucket	1	2	2	0	0	1	0	3
Inv.Thumb	3	4	3	4	2	0	3	0
Inv.Triangle	4	2	1	0	0	1	0	1
Irregular	7	8	2	5	2	10	9	4
Other	5	2	1	2	1	3	3	1
Square/Rectangle	4	17	4	14	0	11	1	12
Stick	2	2	1	4	3	3	6	2
Thumb	2	9	6	5	0	14	1	7

On the left side of the origin is another cluster which includes more nontraditional forms. Stick heads, stick bodies, "other" heads, "other" bodies, circular/oval heads, circular/oval bodies, and irregular heads fall into this category. They are strongly correlated and appear together frequently. For example, the majority (71.05% total) of anthropomorphs with stick bodies have either circular (31.58%), irregular (23.68%), or stick (15.79%) heads. In addition to being less

archetypically Fremont shapes, these shapes all have more variability within them than the shapes on the right side of the origin. For example, a bucket body can have different proportions, but it commonly appears as a parallelogram. Stick head bodies and stick heads are thin and primarily linear. “Other” heads and bodies can be anything not described by the more descriptive and common depictions labeled in the coding packet.

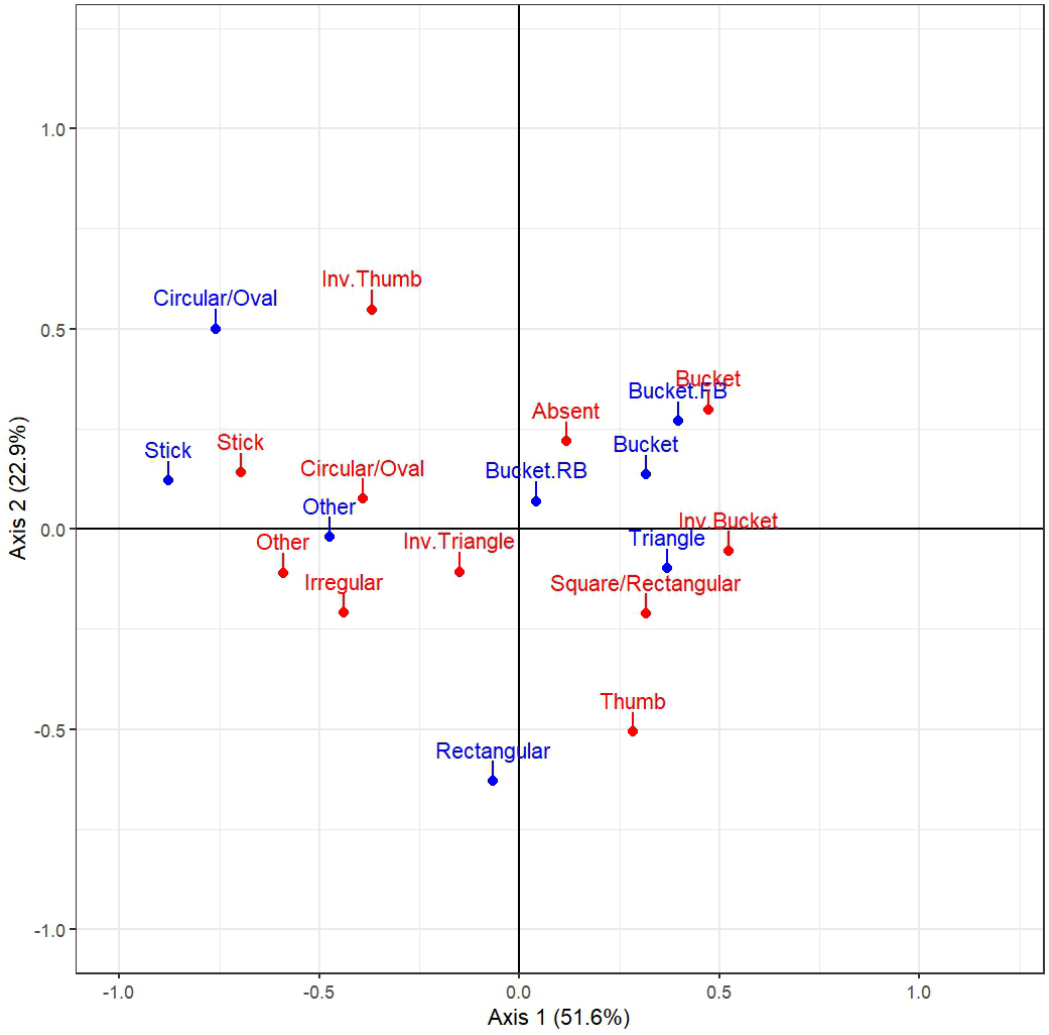

Fig. 5.35. Plot of correspondence analysis comparing head and body morphology at CCC. Head forms are labeled in red, while body forms are labeled in blue.

The divergence between these two groups occurs along the x axis, which accounts for 51.6% of the variability among anthropomorphs at CCC. It is the most important pattern for describing (or predicting) anthropomorph morphology in the region. The first cluster lies closer to the origin than the second cluster, as these shapes account for a larger percent of anthropomorphs at CCC and therefore are the more typical shape in the region.

There are two smaller clusters which exhibit strong polarity along the Y axis, which accounts for 22.9% of variability among anthropomorphs at CCC. The first cluster is circular/oval bodies and inverted thumb heads. While only 13.33% of circular bodies have inverted thumb heads, they are affected by the same factors. Both design forms are found high on the Y axis (0.5) and on the negative side of the X axis (-0.75 and -0.25).

The second cluster includes rectangular bodies and thumb heads. Of the rectangular-bodied anthropomorphs, 25.45% have thumb heads, more than any other head type. They are on the negative side of the Y axis (-0.5 and -0.6) and further right on the X axis (-0.1 and 0.5). While most design forms plot closer to the 0 along the Y axis, these are some of the few which are dramatically positive or negatively affected by the Y axes variable.

The correspondence analysis also indicates that similar design forms are found together, suggesting a consistent vibe within many of these anthropomorphs. Bucket heads are found with bucket bodies; rounded bodies meet up with rounded inverted thumb heads; angular rectangular bodies meet up with the flat portion of a thumb head; stick heads are found with stick bodies; “other” bodies are found with “other”/irregular heads. The head and body motifs echo one another, resulting in anthropomorphs with overall round, angular, or stick appearances at CCC.

I attempted to perform a similar correspondence analysis for the anthropomorphs at GSENM. Unfortunately, this was not statistically feasible because the data consist of a large amount of design forms which were heavily skewed in their distribution among only 77 anthropomorphs. Correspondence analysis is performed using Chi-square distances, but the expected values for GSSENM were too low to perform a useful correspondence analysis. Over 50% of the combinations between head and body design forms had expected values below 1.

Summary

In this chapter, I presented the results of my comparative analysis of anthropomorphs at CCC and GSENM. By examining the plots of each individual design forms, I detected subtle patterns in distribution for a few design forms within CCC (notably male and female genitalia as well as stick heads). I also performed a correspondence analysis on the head and body morphology of CCC and discovered that there are two clusters of design forms: archetypical Fremont design forms and less common forms. My methodology proved to be most effective for comparing patterns between the two regions. There are large interregional differences in the distribution of head and body shapes as well as several head shapes which are present at CCC but not GSENM. In the next chapter, I discuss the meaning of the results in the context of the theories presented in chapter three.

6. Discussion and Conclusion

My goal for this thesis was to explore a new way of analyzing Fremont anthropomorphic rock imagery that focused more on data-driven interpretations. There have been many rock imagery projects for the Fremont region that attempt to determine symbolic meaning, but my aim was to formalize a systematic methodology. I tested it first on the anthropomorphs at Clear Creek Canyon (CCC), with the aim of looking at how different head and body shapes as well as genitals, arms and legs distributed across the region. Studying CCC was fascinating and revealed the morphological shapes which the Fremont of the region used to represent humans, but there proved to be very few patterns in their distribution in this microregion. I therefore expanded my thesis to a larger comparative study between CCC and Grand Staircase-Escalante National Monument (GSENM) to see if the methods could reveal significant interregional patterns.

The method I used was somewhat successful for identifying distribution of design elements within a region and highly successful for finding differences between regions. Using the Watkins coding packet, I found noticeable differences between rock imagery at CCC and the anthropomorphs at GSENM. I also distinguished certain subtle distribution patterns at CCC, including east-west distribution of male and female genitalia, stick heads that occurred primarily at the west end of the Clear Creek, and the frequency of various other design forms. In this chapter, I first explain the trends using landscape and body archaeological theory. After that, I discuss other applications for this method and provide a summary of my thesis.

Discussion of Various Body Parts

The human body is a complex three-dimensional object that is difficult to render in two dimensions. This creates a need for a way to represent humans which can be both easily drawn and recognized. In the United States, if you asked someone to quickly draw a human, they will likely default to a stick figure or rectangular-bodied individual, perhaps with a triangle for a dress and almost certainly with a big circle for a head. It is an instantly recognizable symbol of a person. This expresses cultural norms about the most important parts of the human experience, and these norms are passed down. In the case of the 21st century stick figure, this may be an emphasis on the head as a vessel for the brain and the center of human intelligence—knowledge which the Fremont likely did not have to the same extent (Severo Bem et al. 2021).

The default shape for the Fremont of CCC is the bucket. Buckets are rigid shapes—they must be parallelograms that mimic broad shoulders and a tapered waist. This body shape communicates the parts of the human body that may have been the most important to the Fremont of CCC. Of the bodies at CCC, 48.9% (n=198) are bucket shaped, with or without a rectangular or flared base. When you include the triangle shape (which has the same broad shoulders), that percentage increases to 62.2% (n=252). Of the heads at CCC, 22.2% (n=90) are bucket heads. There is a similar trend in GSENM, as 67.6 (n=52) of the anthropomorphs have some type of bucket body (75.4% when including triangle bodies). Only 9.1% (n=7) of all heads at GSENM are bucket-shaped, and circular/oval or thumb heads are the most common. This template for drawing humans appears to have been passed down culturally in these regions and may communicate beliefs about the body.

Head Shapes

There is a larger variety of head shapes than body shapes in the rock imagery of CCC—thirteen head shapes versus only ten body shapes (Figure 6.1). Rosemary Joyce (2005) wrote that the bodies are the site of lived experience and embodied agency. Heads in particular contain orifices which are both used for sensory experiences as well as communication. Sight, sound, smell, and taste are senses which stem exclusively from the head and give it significance. The variety of head shapes found in Fremont rock imagery could represent their importance to the Fremont and the multiplicity of roles which heads serve.

Heads are easily recognizable and imbued with ritual power. Faces are so intimately tied to human identity that facial recognition of a person increases as familiarity with that person increases (Young and Burton 2017). Trophy heads, which are prominent in Fremont Classic Vernal style rock imagery, broadcast exactly who the deceased was based on facial recognition. This may explain why they were so common among ancient cultures in the Americas including the Ancestral Puebloan, the Nasca, and the Maya (Berryman 2007; Proulx 2001; Schaafsma 2007). Scalping was a tradition among the prehistoric Puebloan people not just as a warfare tactic but also because scalps were thought to have been powerful talismans that brought rain (Schaafsma 2007).

There are several head shapes which are decidedly non-human and may represent the supernatural, including the stick head and many "other" heads. The stick head, which appears 23 times and always upstream at CCC, is small enough that it does not resemble a head or a mask (42SV1904.10:1, 42SV1927.B12). This motif is spread across the CCC region but is not found in the GSENM region. This is evidence that the Fremont living in the CCC region practiced a unified artistic tradition which was stylistically different from variants in other regions.

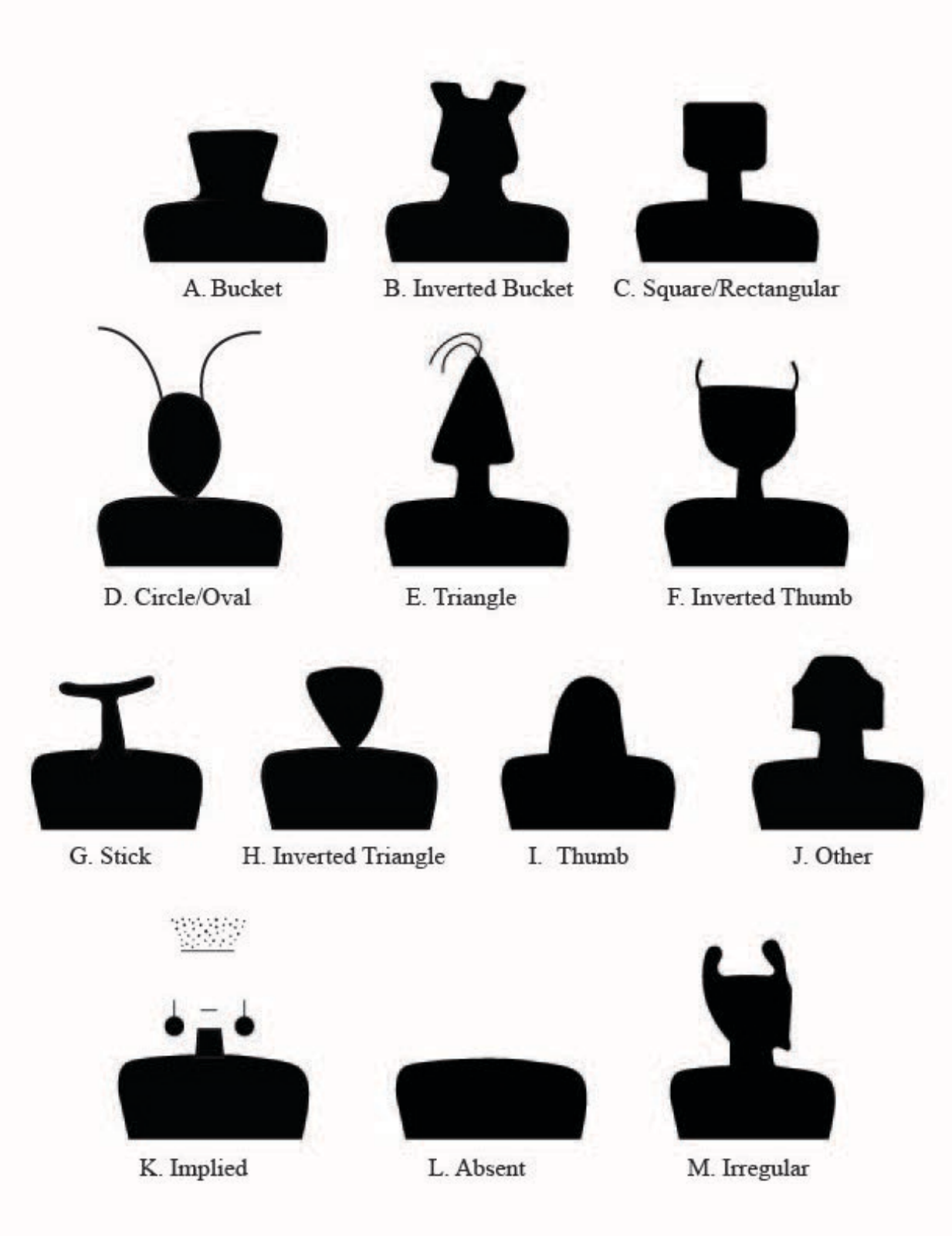

Figure 6.1. Fremont rock imagery head shapes.

There is one circle head shape distinguished by a vertical line down the center which appears in several places (42SV1918.4:1, 42SV1918.34:1; 42SV1927.B19:1, 42SV1926.B90:2) around CCC (figure 6.2). Because of its striped face and spiky hair, LaVan Martineau (1985) has interpreted this as a badger head, indicative of the local Badger Clan. This matches the contemporary explanation and nickname for figure 42SV1914.2:1, the "Badger Man" (personal communication with Elizabeth Nagengast-Stevens). Figure 42SV1923.B28:2 is depicted with similarly spiky hair, but no facial stripe. The same stripe appears in locations unattached to the body and not appearing to be a trophy head (42SV1918.8, 42SV1918.27, 42SV1918.B4, 42SV1927.B23).[16] Martineau

Figure 6.2. Badger imagery at CCC. Top row (left to right): 42SV1918.4:1, 42SV1918.34:1; 42SV1927.B19:1, 42SV1926.B90:2, 42SV1923.B28:2. Bottom row (left to right): 42SV1918.8, 42SV1918.27, 42SV1918.B4, 42SV1927.B23.

[16] This is similar to depictions of atlatls in other Native American rock imagery, although it does not appear in conjunction with other hunting motifs or combat scenes such as prey or other weapons (Whitley 2021).

(1985) has interpreted this as a badger-striped sun, meaning that the Badger Clan may have been experiencing a drought. This is again only found at CCC as a part of the stylistic tradition of the region and expression of the Badger as a totem which could be embodied by clan members.

There are four head shapes which are found at CCC but not GSENM. These include stick (5.7% of CCC), inverted thumb (4.7% of CCC), inverted bucket (2.2% of CCC), and implied (1.2% of CCC). These shapes could be indicative of cultural concepts about the body that were not emphasized or as culturally significant. At GSENM They make up a small percent of CCC's heads but would likely appear in small numbers at GSENM if the two regions had the exact same artistic tradition.

The missing head shapes at GSENM represent a clear departure from the CCC style. The distinct head and body shapes at CCC show that the Fremont there had a set of morphological options from which they could choose and apply as wanted. They are not part of the GSENM canon of shapes that match their conceptualization of heads.

Body Shapes

The same general body shapes (Figure 6.3) are found across both regions in varying percentages. CCC has a much higher percentage of triangle and rectangular bodies (13.3% and 13.6% respectively, compared to 7.8% and 3.9% respectively). Meanwhile GSENM has a much larger percent of bucket bodies with a flared base (26%) than CCC (11.1%).

In general, the shared body shapes are evidence that both regions were likely part of the same Fremont complex (Searcy and Talbot 2016). The most common body shapes (which are close to the center of the correspondence analysis) are varieties of bucket bodies. These are

Figure 6.3. Fremont rock imagery body shapes.

easily recognizable and help Fremont anthropomorphs stand out from depictions of bodies depicted by other groups in the modern Western world.

Genitalia

A small percentage of anthropomorphs—7.7% (n=31) at CCC and 1.3% (n=1) at GSENM—are depicted with genitals. This is a clear indicator of their biological sex, which usually corresponds to a gender and is "a primary organizing principle for labor and social status in all societies" (Leach 1999). It seems natural that the Fremont would use genitalia to illustrate the importance of biological sexual dimorphism and ascribed societal roles. These characteristics may function the same way as depicting shamans in rock imagery. Their appearance, clothing, and held objects communicate their role in society.

The single indicator of sex at GSENM is a figure squatting above drops of red pigment implying menstruation. Menstruating denotes a more specific identity or status than just sex. This color has been tied to the power of mother earth goddesses, the fertility of women, or when a girl first menstruates and transitions into womanhood (Hays-Gilpin 2006). It could also reference gendered seclusion at the time of menstruation, which occurs in many cultures and has been recorded among groups in the American Northwest (Carney et al. 2019).

Depictions of genitalia are more common at CCC and follow a pattern of male genitalia upstream (west) and female genitalia downstream (east). Apart from two depictions of female genitalia in the western half of the canyon, all the genitalia follow this divide with a wide berth in between them. The gendered anthropomorphs could be evidence that there was a gendered divide in the use of space between upstream and downstream land. This could be an incidental manifestation, or it could be a purposeful modification to the environment designed as a

signpost. This could also be reflective of the different values of the communities that lived along the river. The placement of genitalia also suggest a metaphor for intercourse, as the male genitalia placed upstream would symbolically flow downstream to the female genitalia. This metaphor reflects the reliance on Clear Creek for its life bringing properties as it allows plants, animals and humans to grow and reproduce.

There are other depictions of gender outside of genitalia which I did not study in this thesis. Among these are size relative to other anthropomorphs, hair treatments such as hair whorls that have been ethnographically tied to females, string skirts, which are tied to females (Warner 1991; Yoder 2023). Judith Warner (1991) has also cited evidence for an anthropomorph that has a figure-within-a-figure at CCC, representing either a spirit or pregnancy.[17] Buckets with flared bases and rectangular bases may be manifestations of a female or "mother" motif, according to Martineau (1985).[18] However, this body shape has been found with both female genitalia (42SV1928:B9.2) as well as male genitalia (42SV1928.B31:1). In fact, the cross-tabulation (Table 5.2) of body shapes and genitalia from CCC and GSENM shows that of the bucket-shaped bodies with rectangular or flared bases, three of them have male genitalia and two of them have female genitalia. Both shapes have wide shoulders and tapered waists with larger hips. The idea that these body shapes correspond with femininity, however, has not been proven in central Utah. Interestingly, there are five male figures with rectangular bodies and six male figures with stick bodies, but no female figures with either body shape. These streamlined body

[17] I have not seen this figure as it was not visible in the 1992 survey drawings of photographs due to their low quality.

shapes were not generally used to represent women, likely because so much of their inherent femininity was internal, rather than external.

Future plans

There are many other aspects of symbolic meaning that could be explored when examining geographical appearances of anthropomorphic figures. This thesis is the first application of the Watkins coding packet and a first step in the Fremont Rock Art Project (FRAP). The next step of the project is to continue to build a database so that other archaeologists who follow this methodology can store their data in the same place and also examine the relation between place and the depiction of various art forms. This will allow for easy comparison between different Fremont rock imagery studies done in different places and by different researchers. As rock imagery dating techniques improve in the future, tighter chronological control would allow for the examination of specific time periods.

Collaborative FRAP works so far include a conference presentation entitled “Fremont Figures: A Systematic Approach to Fremont Anthropomorphic Rock Art” which will be published as a paper. This presentation took place at the 2023 Great Basin Anthropological Conference, where several attendees expressed interest in the database. Maya Watkins is also applying the coding packet to Fremont headdresses for her undergraduate senior thesis.

Beyond the head, body, arms, legs and genitalia discussed, I recorded as many comprehensive design elements as possible including facial features, held objects, and headdresses. Once each anthropomorph has been assigned a code from the packet, researchers could study any number of topics. These may include the appearance of different types of animals, abstract symbols, celestial entities, and/or the combination of any number of symbolic

images. I plan to explore more of these design elements in the future to better understand the Fremont.

Conclusion

I chose to study head and body morphology because I view it as the most basic expression of humanity. Paiute rock imagery expert LaVan Martineau believed firmly that rock imagery is a universal native language that differs only based on the topic being discussed. While I defer to his interpretations of the rock imagery and knowledge of Paiute religious practices, I believe that rock imagery styles vary between different tribes, places, and times. The rock artists of Clear Creek Canyon used specific shapes that convey their *Weltanschauung,* and their perspective differed slightly from that at Grand Staircase-Escalante. Through analyzing the shape of Fremont anthropomorphs, we can get closer to the meaning of who the Fremont are and how they saw themselves.

Studying the rock imagery of Clear Creek Canyon and Grand Staircase-Escalante National Monument has been an enlightening experience. On the importance of studying rock imagery, Martineau wrote the following:

> There are many questions concerning the American Indians that still need to be answered and many rocks yet to be read that will fill in the thousands of years of blank Indian history. It is for this reason that the petroglyphs should be preserved and dug into just as deep as the archaeologists dug into Five Finger Knoll—until every scrap of evidence is found and evaluated…Maybe the next generation's findings will be based on the in-depth efforts made by the Paiute Tribe and Brigham Young University in 1984 [Martineau 1985:35-36].

In addition to identifying the common shapes and their distribution in the two regions I have learned to recognize, appreciate, and even understand some Fremont rock imagery. As one of the only visual art forms left behind by the Fremont, I believe that some of the themes of the rock imagery can be taken at face value. Whether they represent an intentional attempt to demonstrate Fremont values, they definitively informed the aspects of Fremont life that came after their creation as they were woven into the landscape.

The purpose of this study was to use new methods to collect comprehensive information on the anthropomorphic rock imagery of the Fremont and to compare these within and between two regions: Clear Creek Canyon and Grand Staircase-Escalante National Monument. My goal was to collect information, hypothesize about it, and eventually add it to a database that would allow others to follow the same process and compare their findings. The more systematic nature of this process is a departure from projects of the past (Martineau 1985; Morss 1931; Schaafsma 1970) and has a clear vision and standardized methodology of how to get there. My hope, like Martineau, is that archaeologists of the future will be able to contribute and build on each other's work so that we can learn more about the "enigmatic" Fremont (Janetski 2008).

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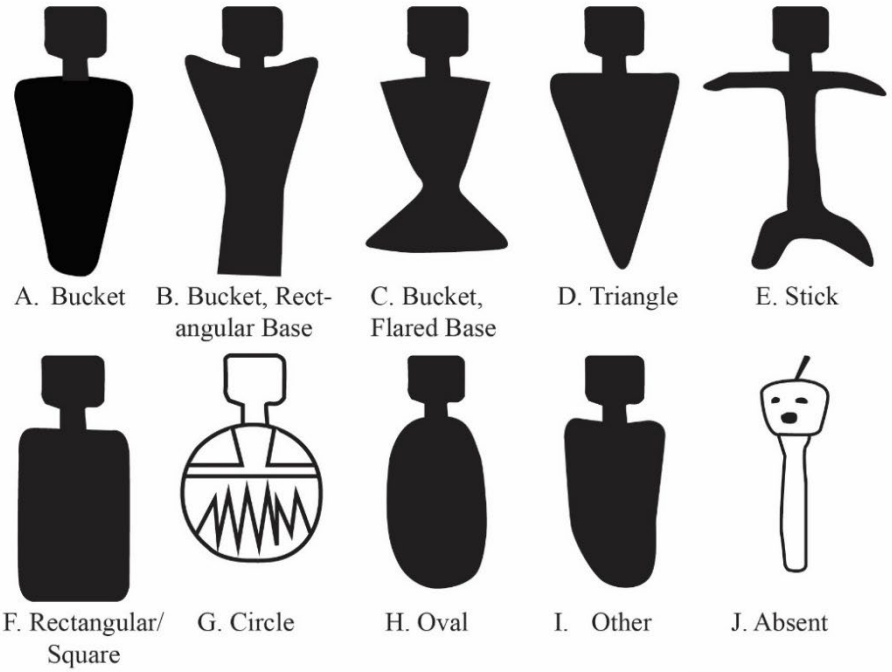
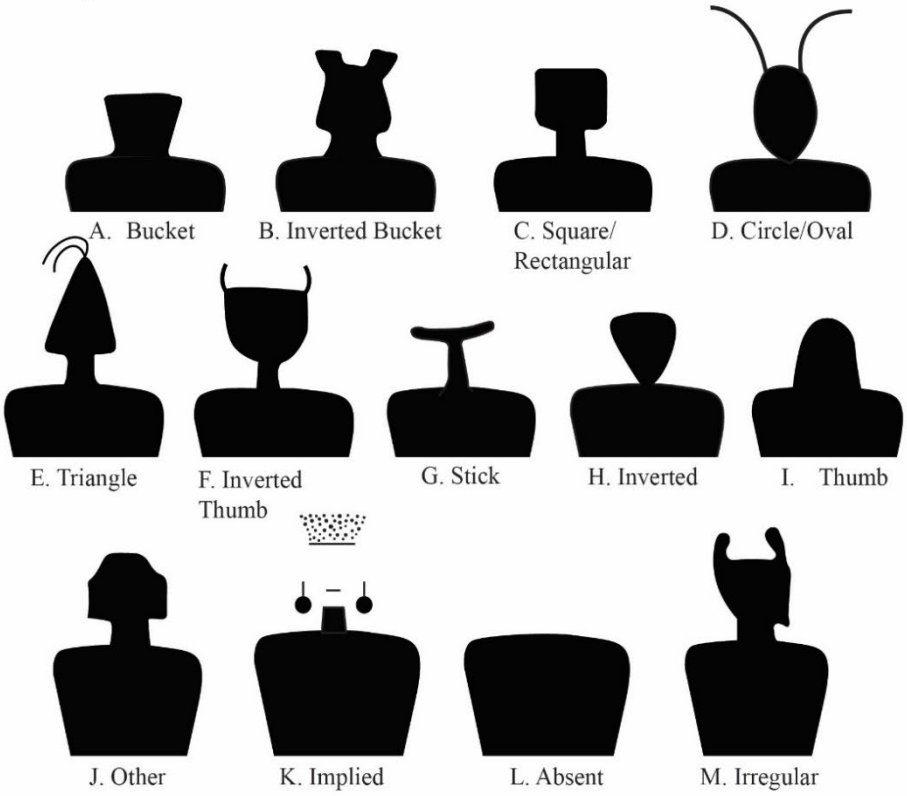
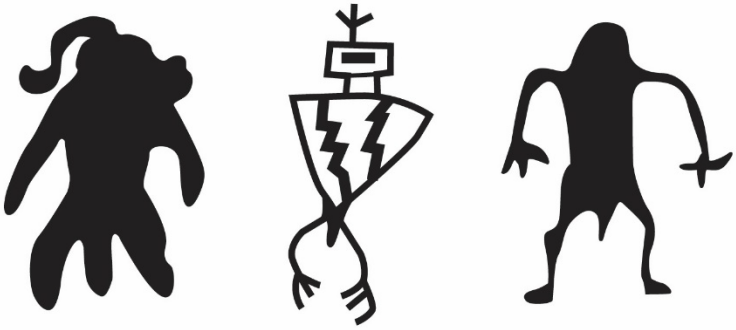
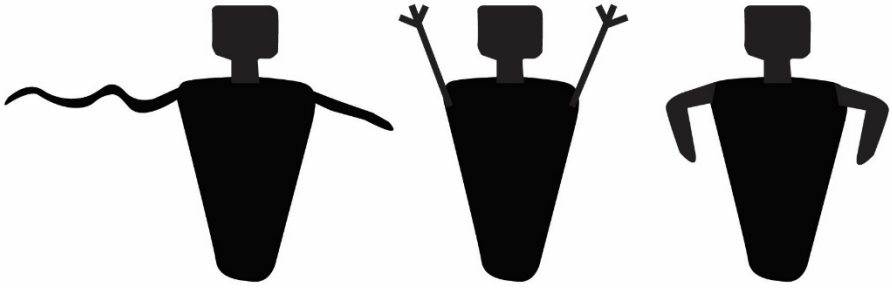
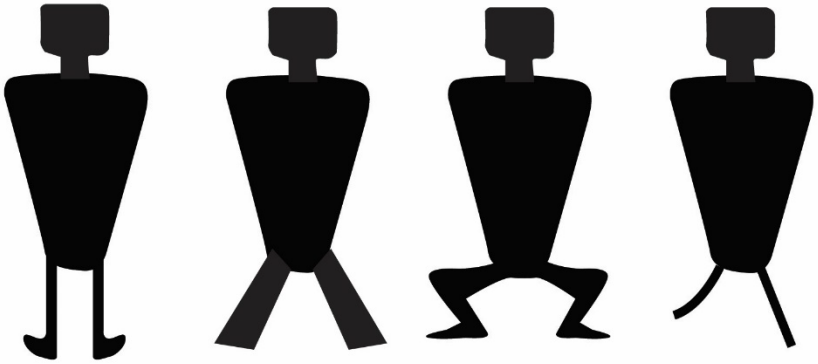
Appendix A: Coding Packet

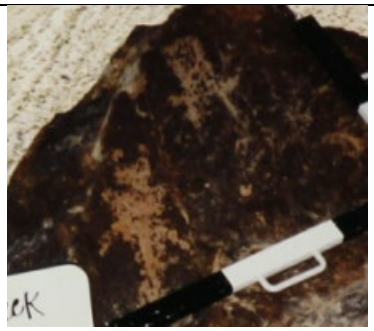
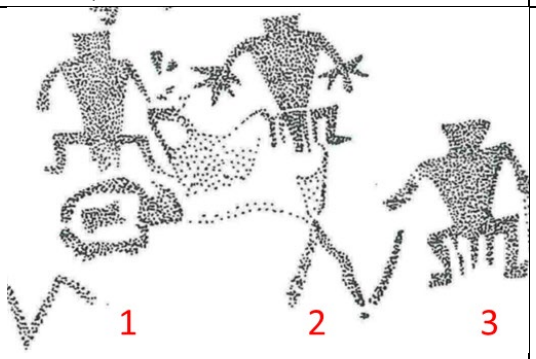
Design Element	Design Forms
Body Shape	
Head Shape	

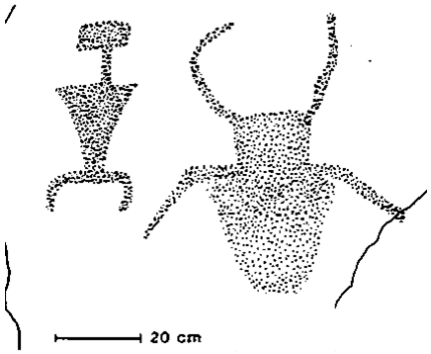
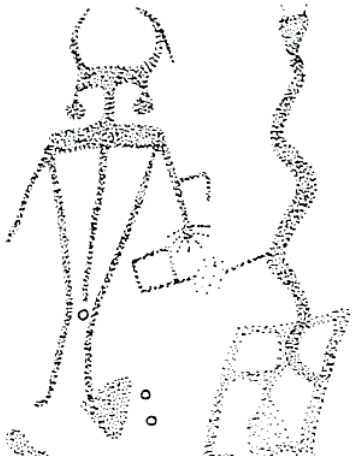
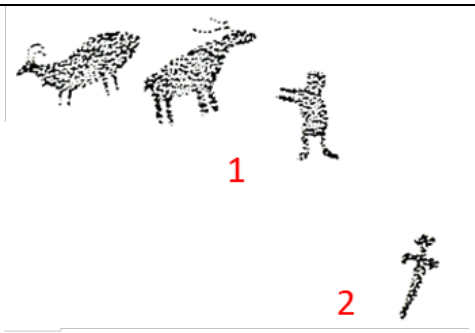
Design Element	Design Forms
Genitalia	 Female Genitalia
	 Male Genitalia
Arms	 Present
Legs	 Present

Appendix B: Anthropomorph Drawings

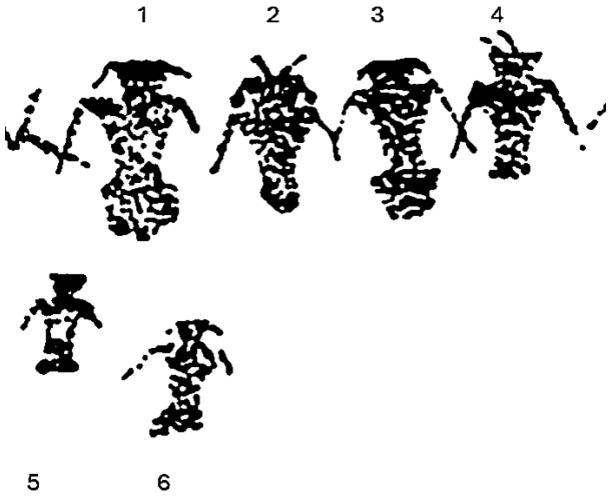
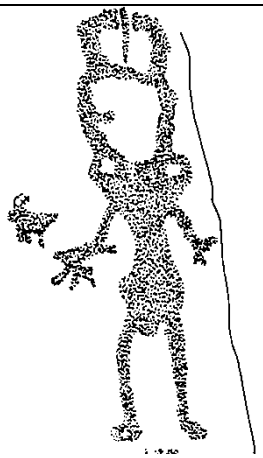
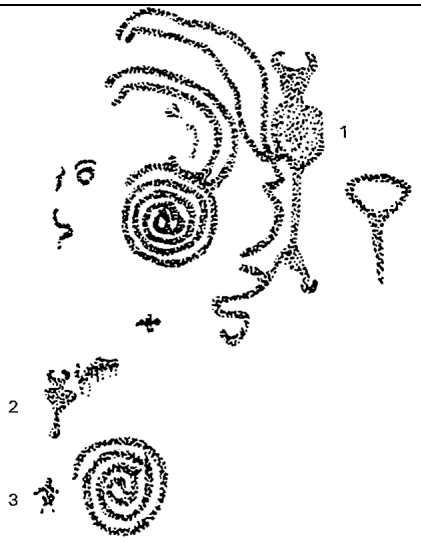
Clear Creek Canyon

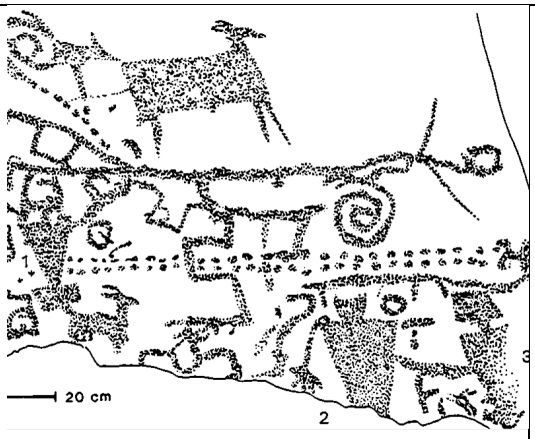
All photographs and drawings are from the original BYU IMACS site forms.

42SV1689	 Panel 2	 Panel 3
	 Panel 5:	 Panel 6
	 Panel 7	
42SV1900	 Panel 2B	 Panel 3B

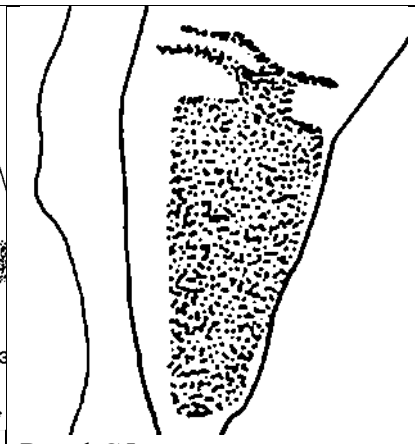
42SV1904	 Panel 4	 Panel 9
	 Panel 10	
42SV1905	 Panel 2	
42SV1906	 Panel 2	 Panel 6

42SV1907	 Panle 1	 Panel B2
	 Panel B4	 Panel B5
	 Panel B7	 Panel B8
	 Panel B9	 Panel B10

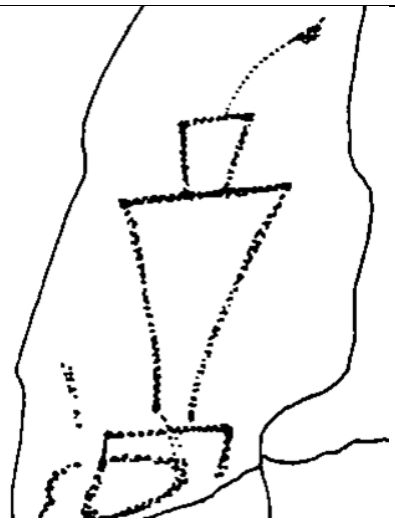
42SV1909	 Panel 1	 Panel 2
	 Panel B3	 Panel B4
	 Panel B6	 Panel C1



Panel C5



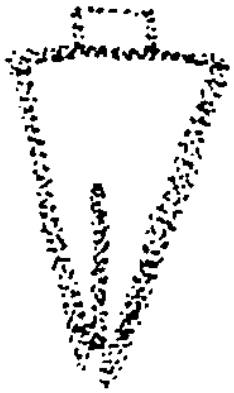
Panel C5



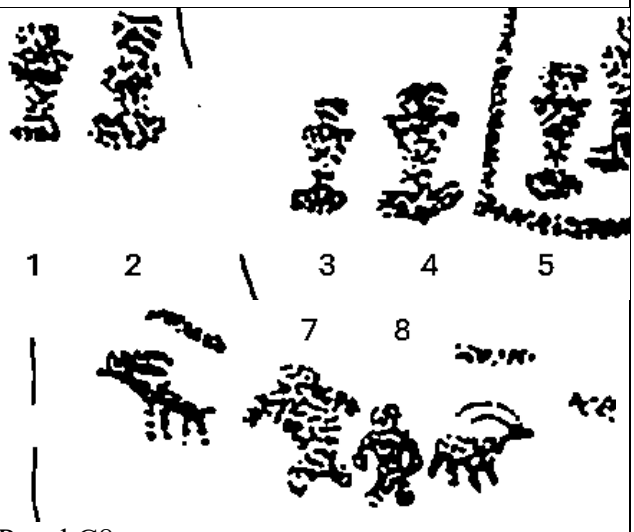
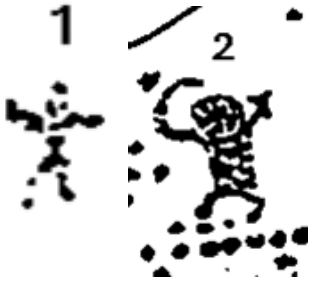
Panel C20

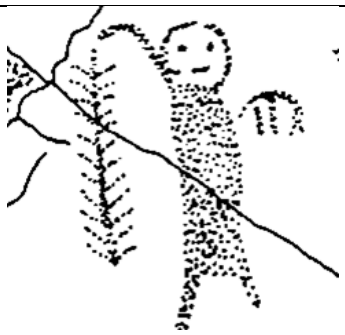
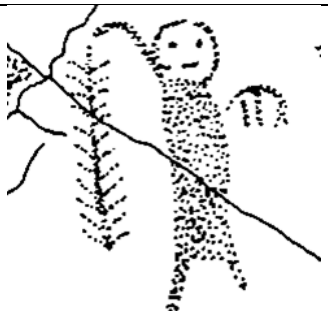
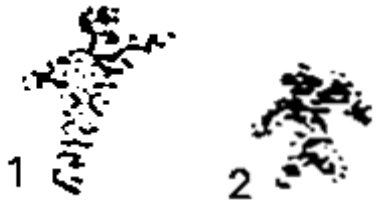
Panel C21

Panel C22



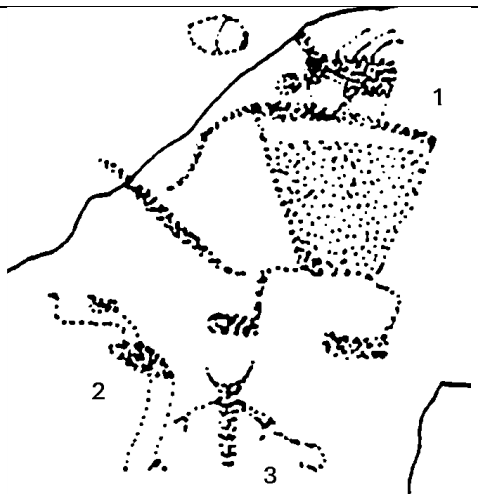
Panel D3

42SV1911	 Panel 1	 Panel 2A
	 Panel 3	 Panel C2
	 Panel C3	 Panel C8
42SV1913	 Panel 1	

42SV1914	 Panel 2	 Panel 3
	 Panel 4a	 Panel 5
	 Panel 11	 Panel 17
42SV1915	 Panel 1	 Panel 3

Panel 4

Panel 7



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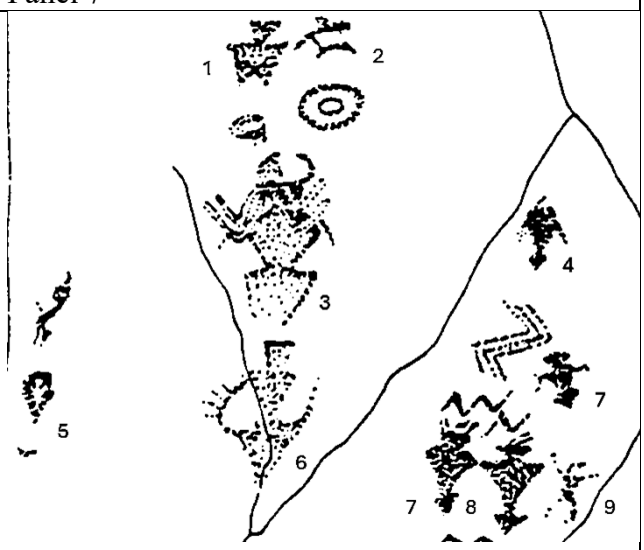

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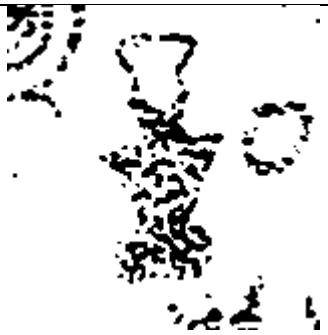
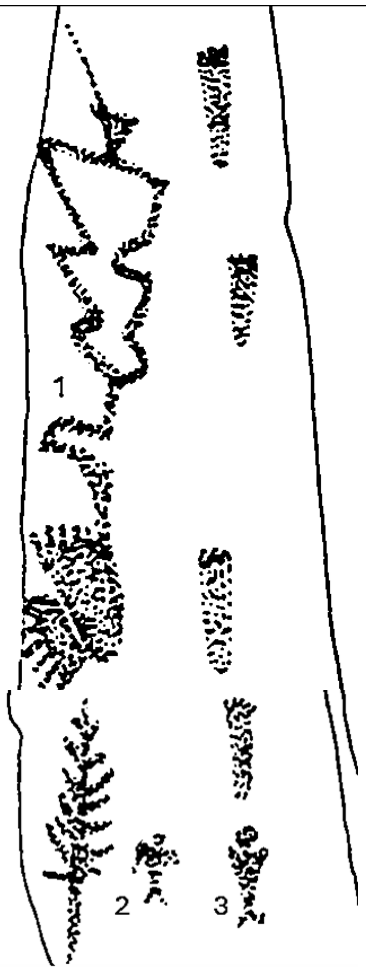


Panel 10

Panel 11

Panel 12



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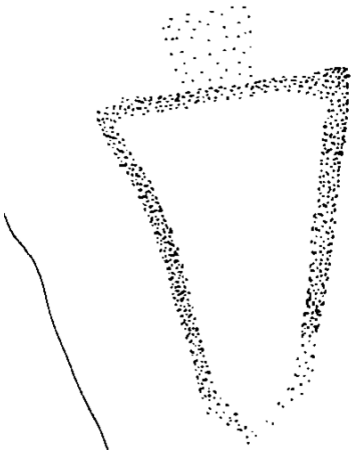

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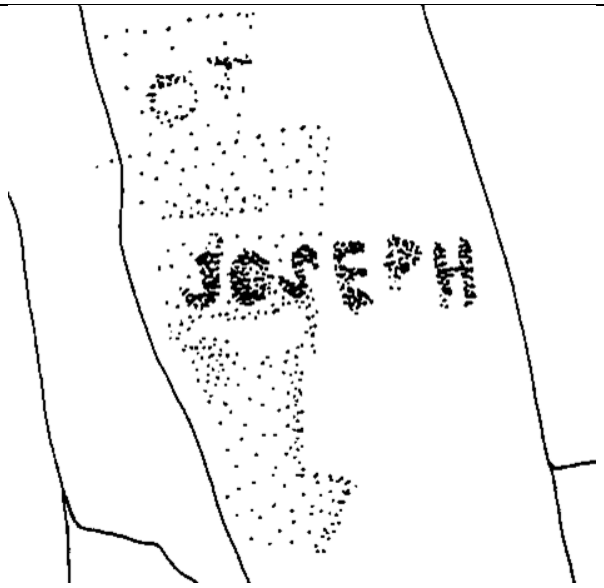

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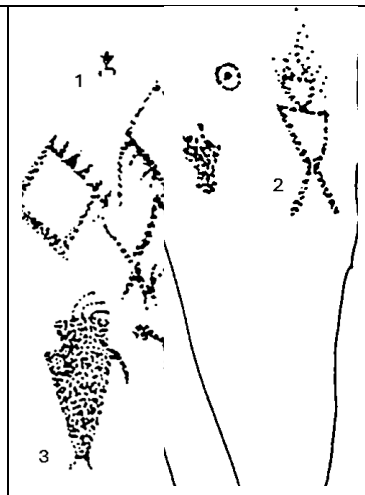
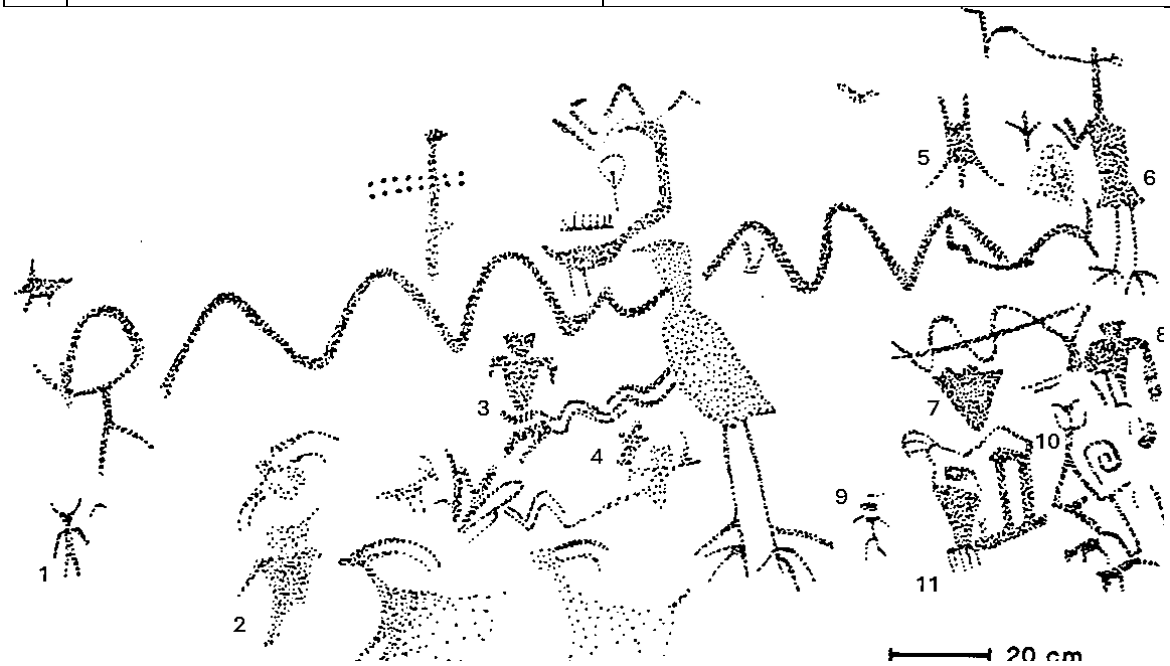


Panel 16

Panel 19



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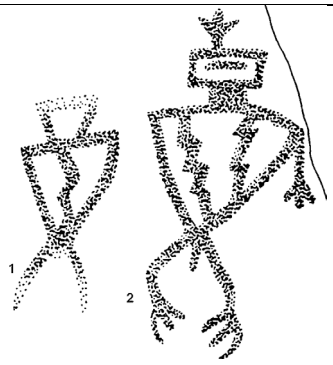
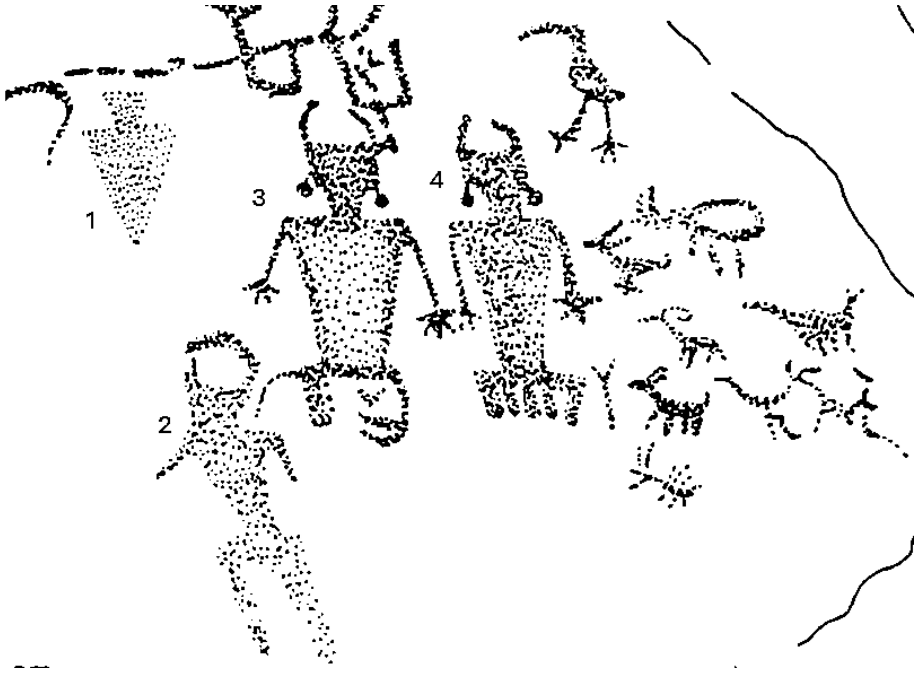


Panel 23

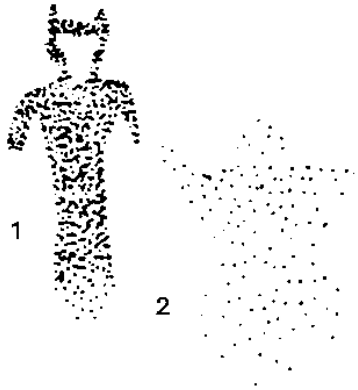
Panel 26

Panel 27:

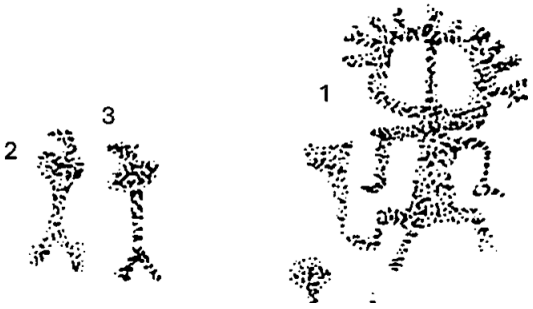


Panel 28

Panel 29



Panel 31

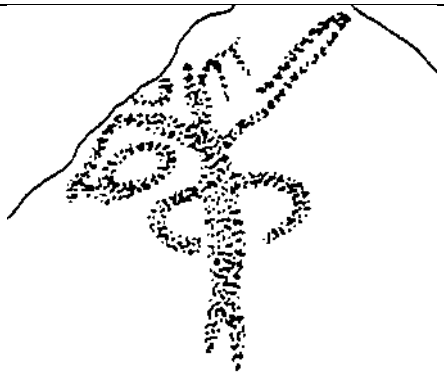


Panel 34

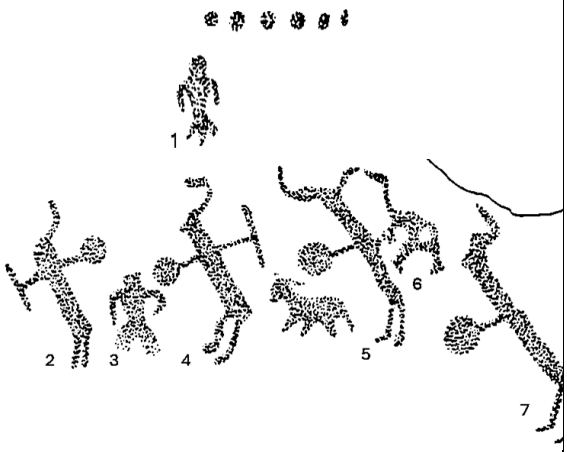
Panel 35

Panel 36

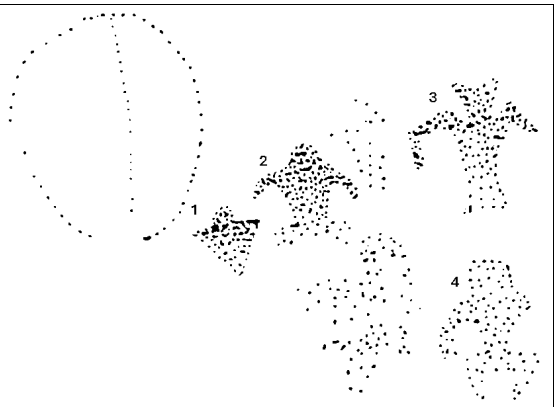
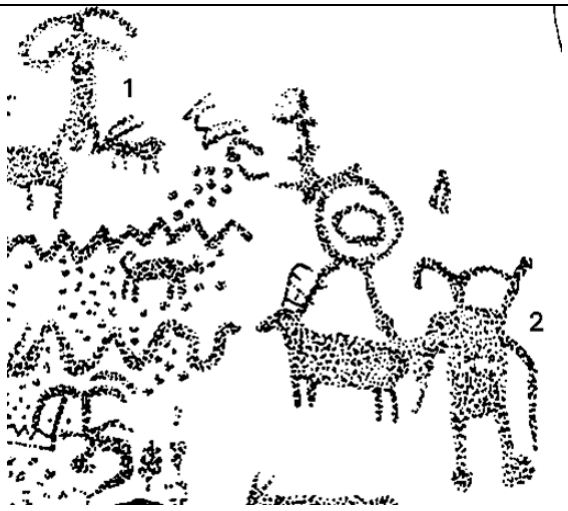
Panel 37

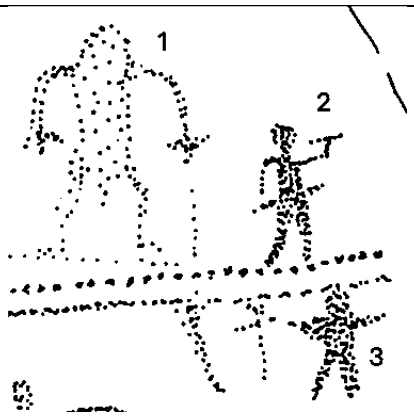


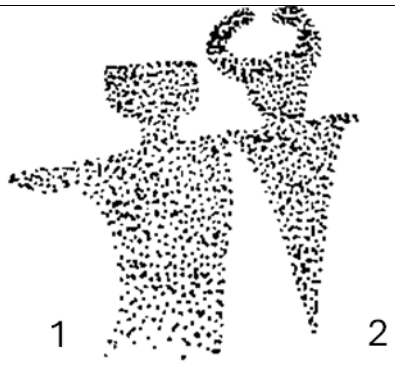
Panel 56



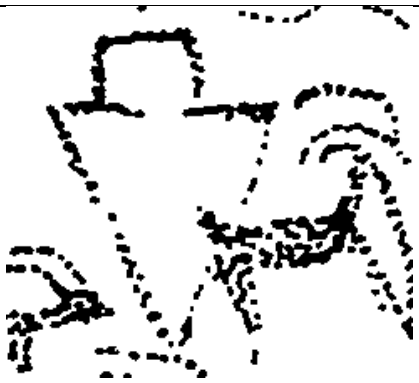
Panel 60

	 Panel 61	 Panel B4
42SV1919	 Panel 1	 Panel 2
42SV1921	 Panel 5a	
42SV1922	 Panel C2	

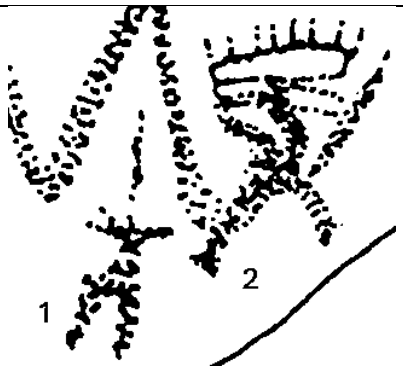
42SV1923	 Panel 9	 Panel B10
	 Panel B12	 Panel B13
	 Panel B14	 Panel B16
	 Panel B18	 Panel B21



Panel B23



Panel B24

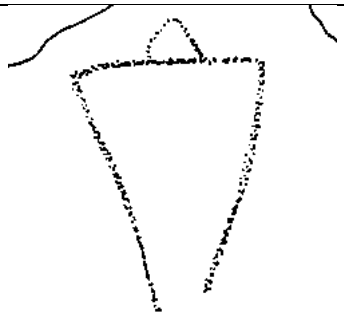


Panel B28

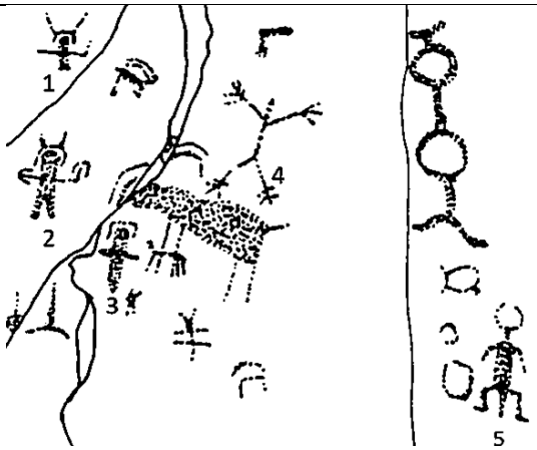
Panel B29

Panel B30

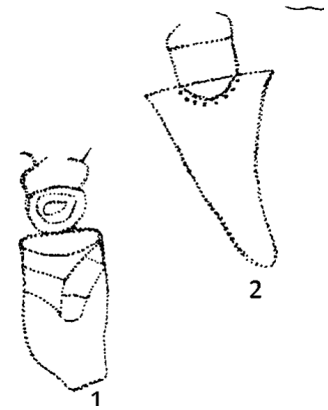
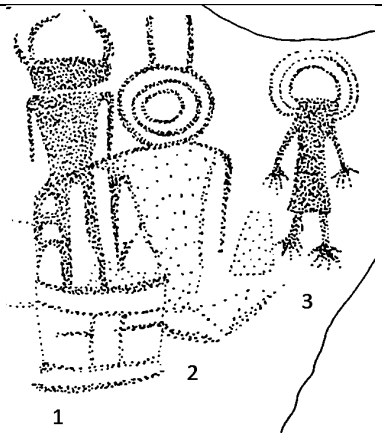
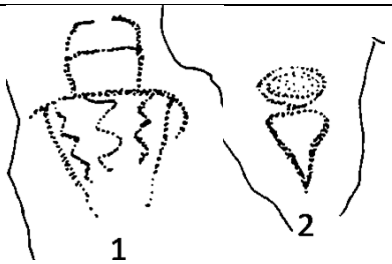
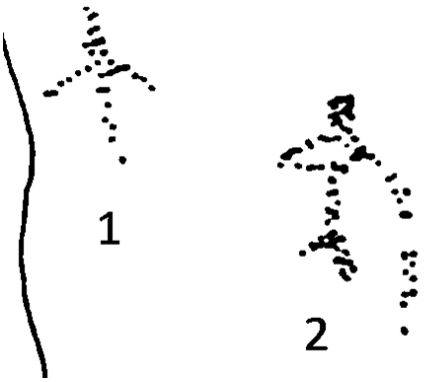
Panel C1

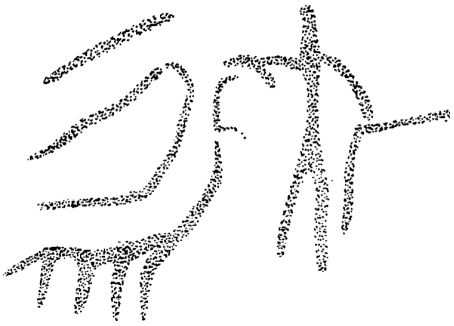
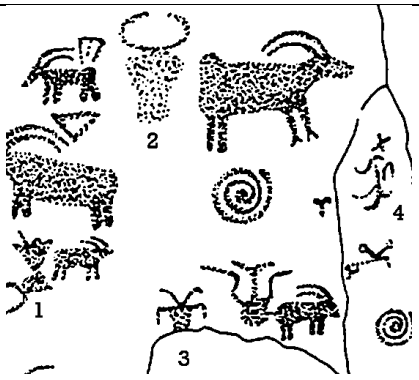


Panel C8

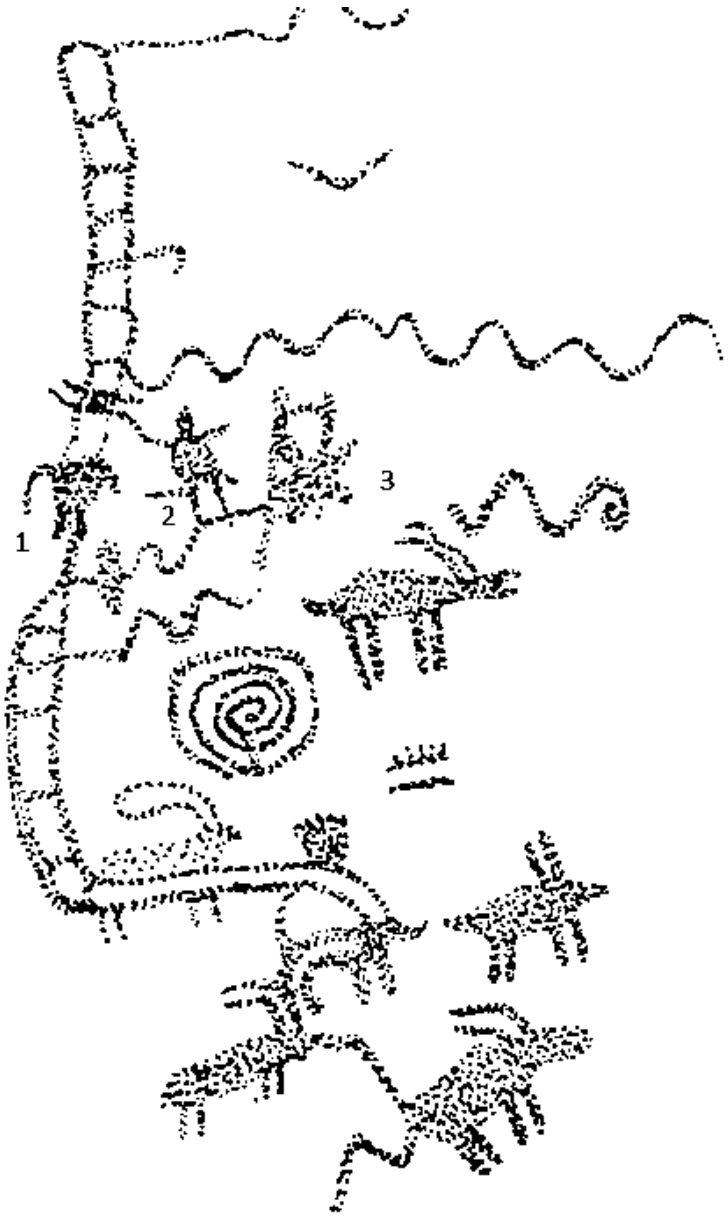


Panel C9a

	 Panel C11	 Panel C12
	 Panel C16b	 Panel C17
	 Panel C18	 Panel C20
42SV1924	 Panel A2	 Panel A5

42SV1925	 Panel A2	
42SV1926	 Panel 1	 Panel 4
	 Panel 12	 Panel 15
	 Panel 16a	 Panel 17

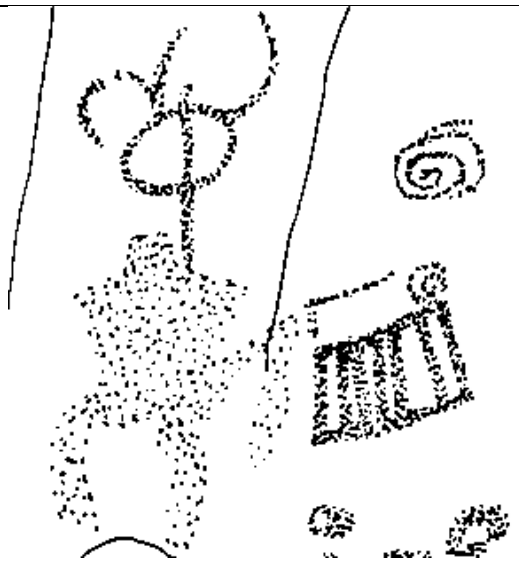
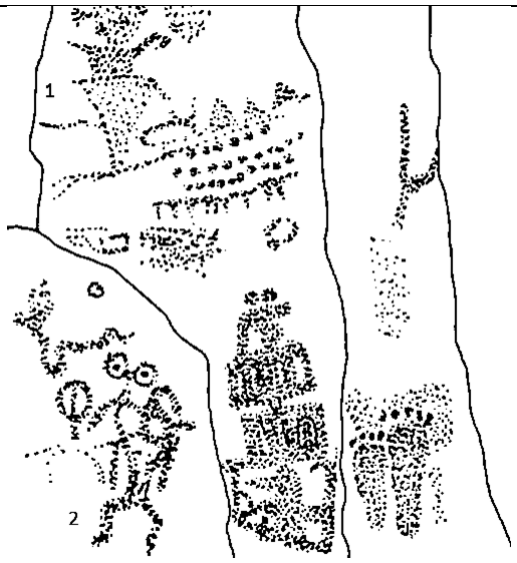
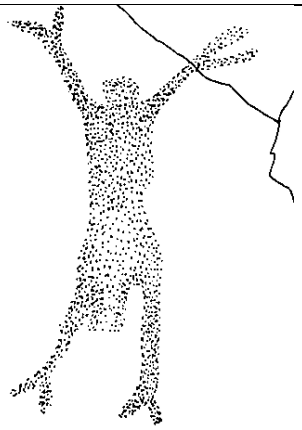
42SV1927	 Panel B2	 Panel B7
	 Panel B9	 Panel B11
	 Panel B12	



Panel B13

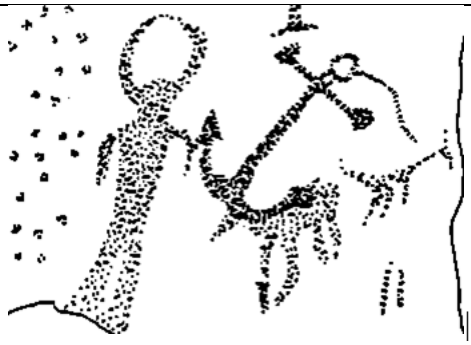
Panel B15

Panel B16

	 Panel B19	 Panel B23
	 Panel B29	 Panel B24
42SV1928	 Panel 3a	 Panel 4a

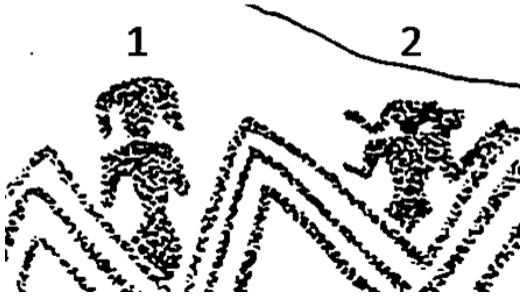
Panel 4b

Panel 6



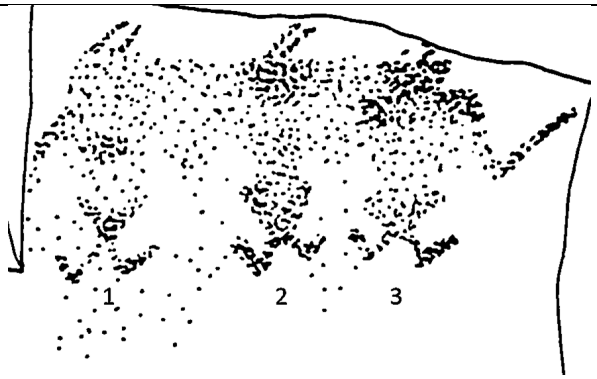
Panel 9

Panel 14



Panel 16

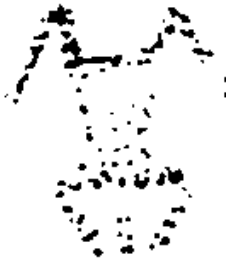
Panel 17



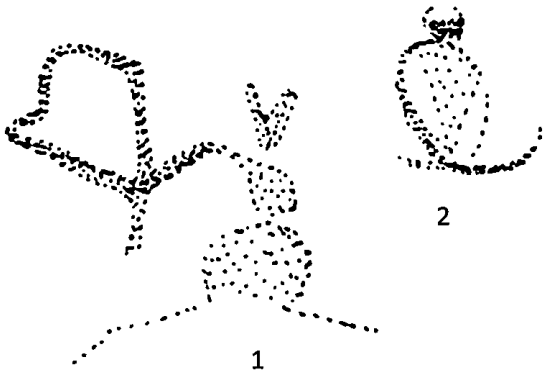
Panel 9

Panel 21

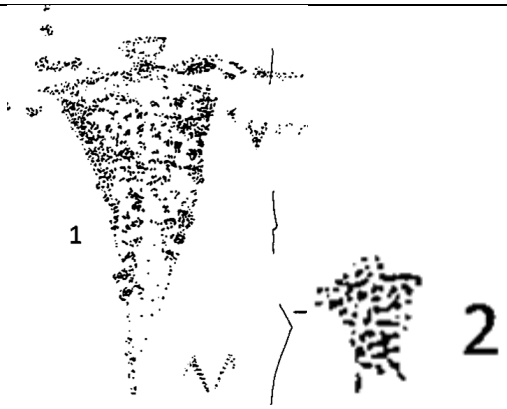
Panel 25



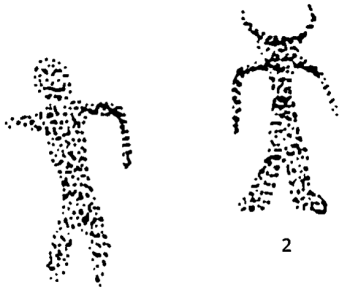
Panel 29



Panel 31

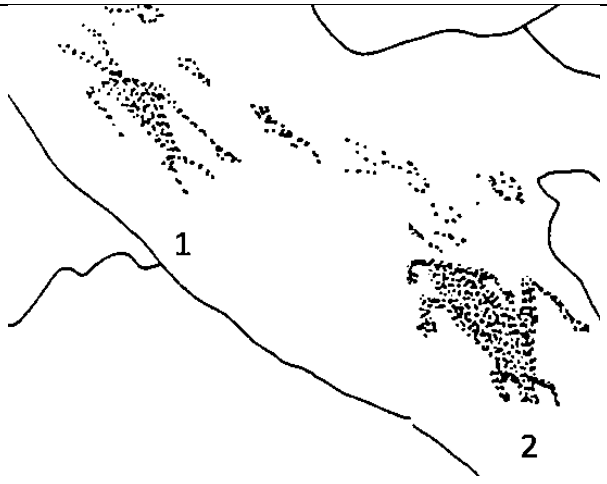


Panel 32

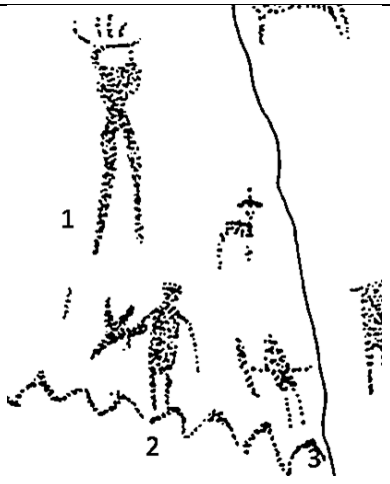


Panel 33

Panel 34b



Panel 35



Panel 37

Panel 39

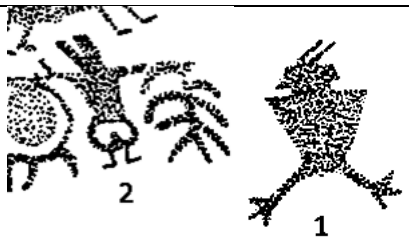
Panel 41b

Panel 43

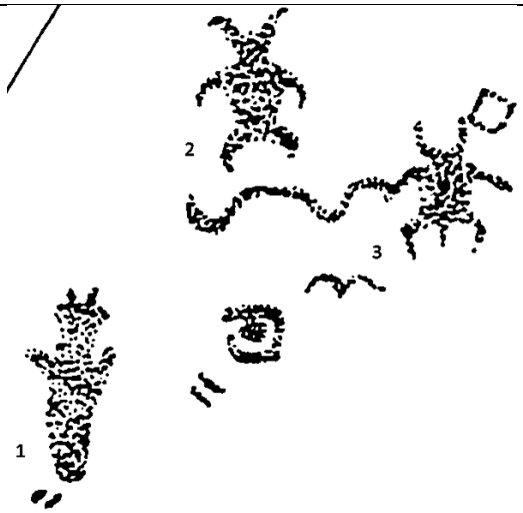
Panel 45

Panel 56:

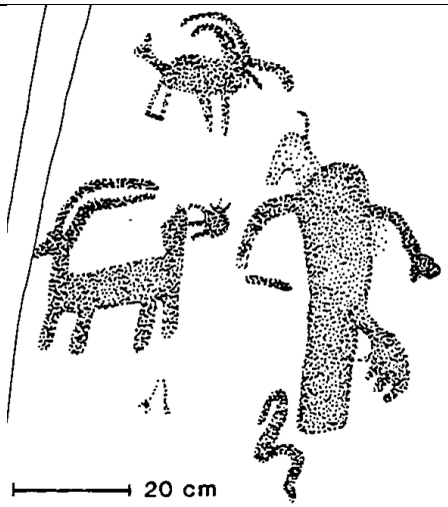
Panel 57



Panel B8



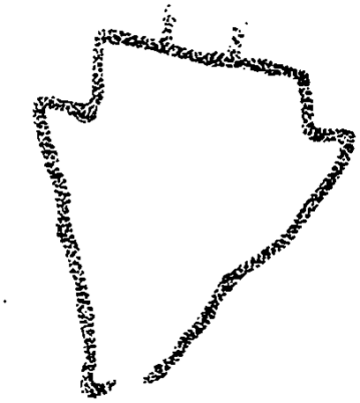
Panel B12a



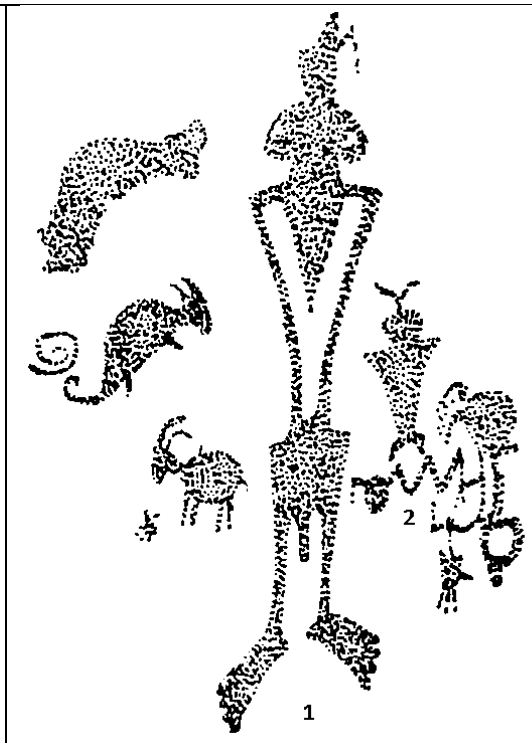
Panel B16

Panel B17

Panel B22

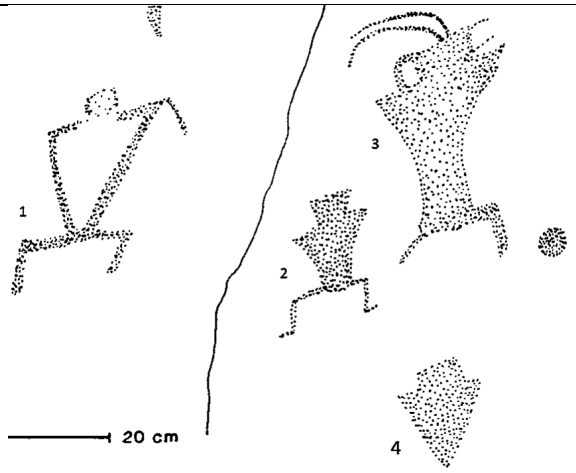


Panel B26

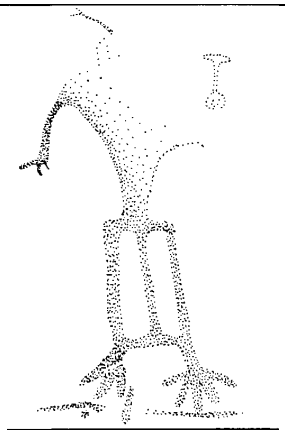


Panel B29

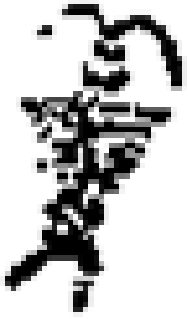
Panel B31



Panel B32



Panel B33



Panel B34c

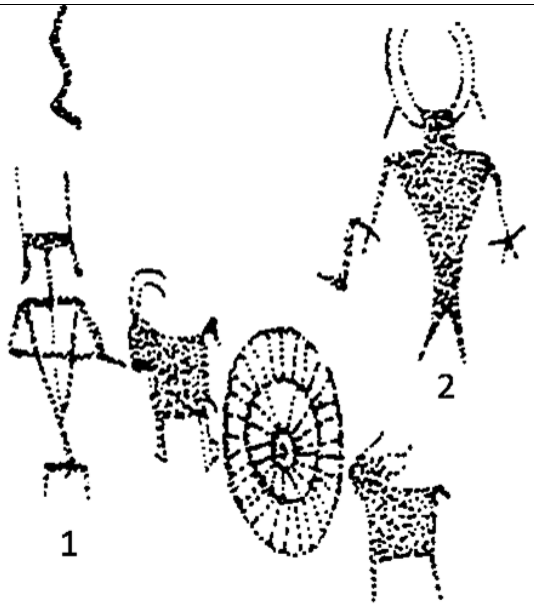
Panel B36

Panel B37a


Panel B41


Panel B44

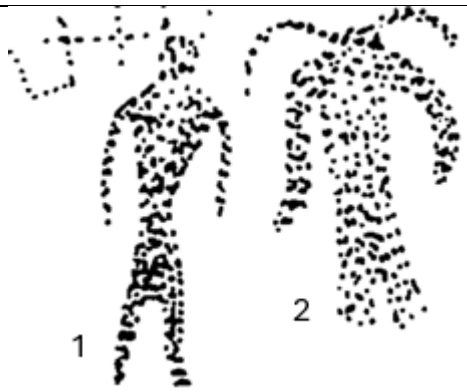
Panel B46a



Panel B47

Panel B50:

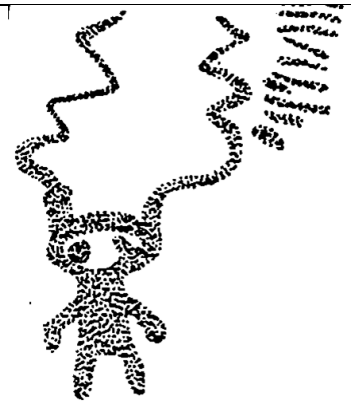
Panel B51



Panel B52

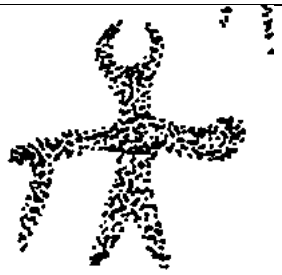
Panel B53

Panel B55



Panel B56

Panel B59



Panel B60

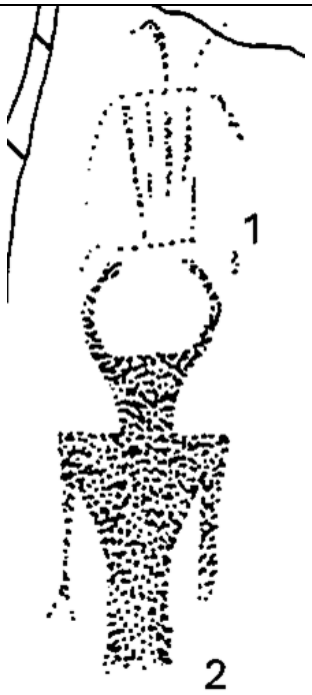
Panel B69

Panel B70

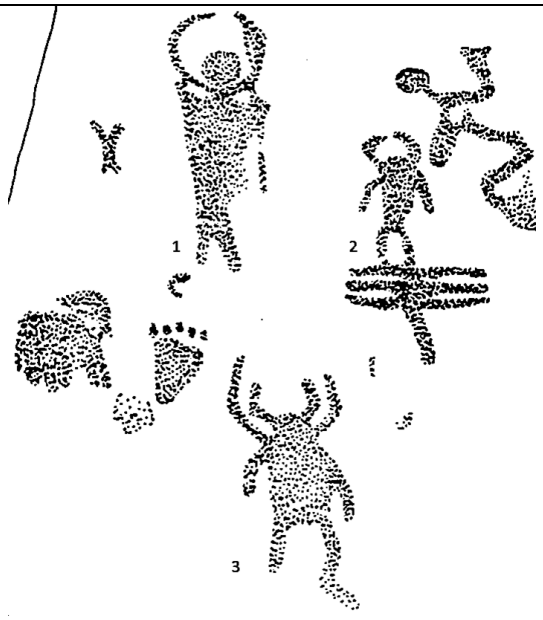
Panel B72

Panel B74a

Panel B75



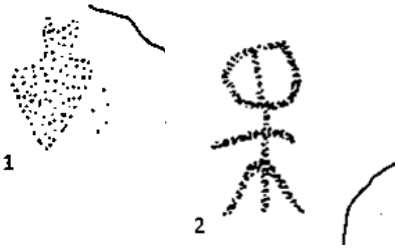
Panel B80a



Panel B82

Panel B84

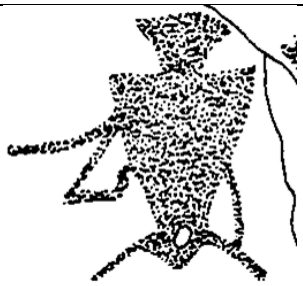
Panel B85



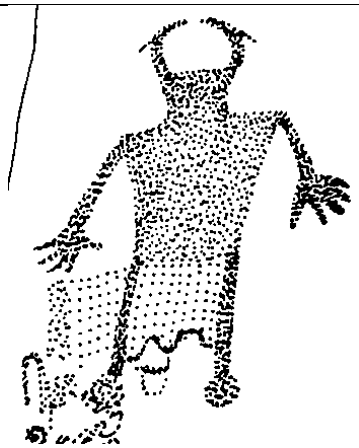
Panel B86

Panel B90

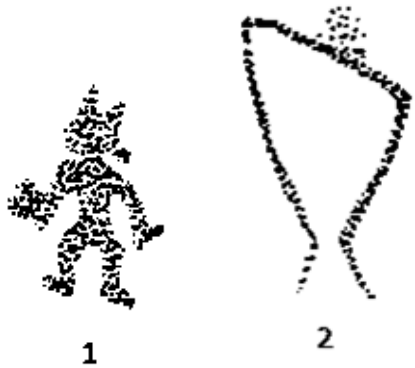
Panel B92



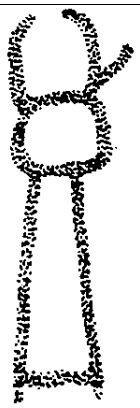
Panel B94

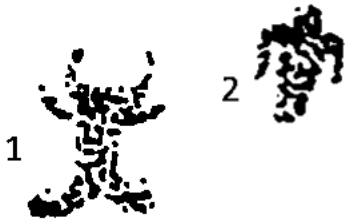
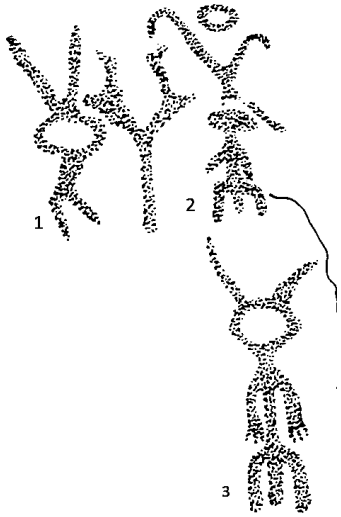


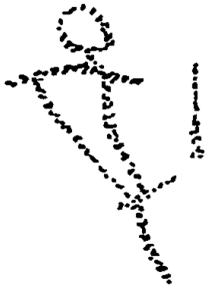
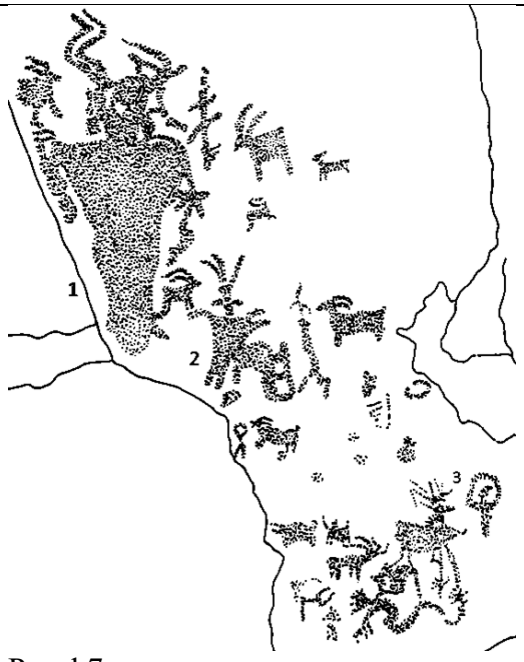
Panel B96



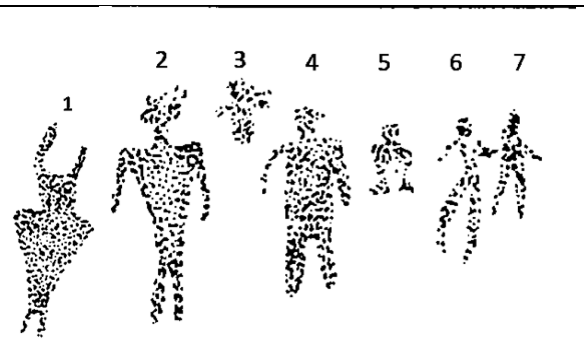
Panel B102

	 Panel B103	 Panel B105
42SV1929	 Panel 2	 Panel 3
	 Panel B1	 Panel B7

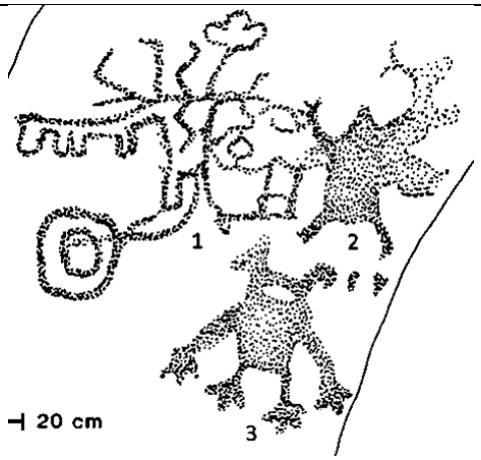
	 Panel B9	 Panel B10
	 Panel B11	 Panel B12
42SV1930	 Panel B2	 Panel B4
	 Panel B9	 Panel B10

42SV1931	 Panel B3	
42SV1933	 Panel 2	 Panel 4
	 Panel 7	

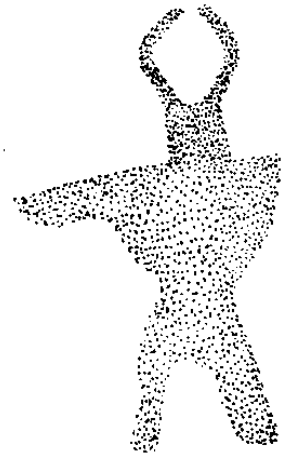
Panel 8



Panel 11

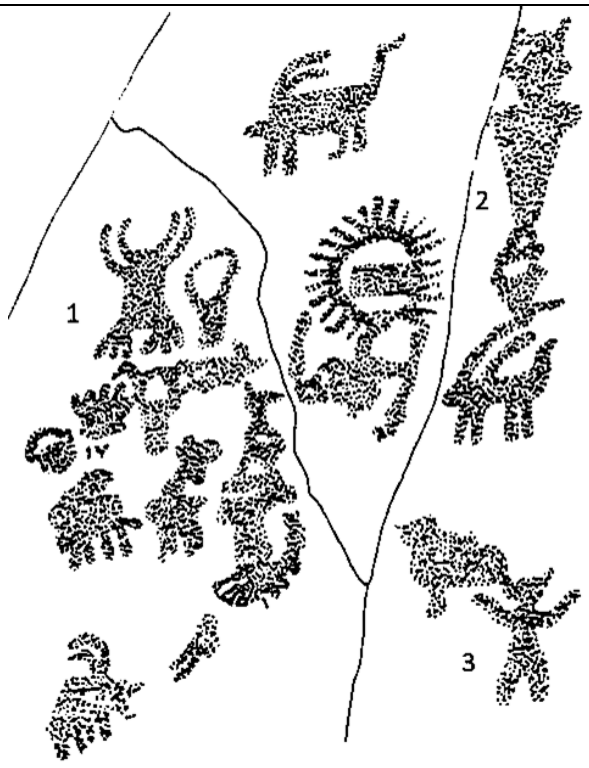


Panel 15

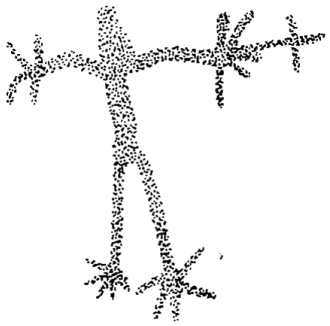


Panel 16

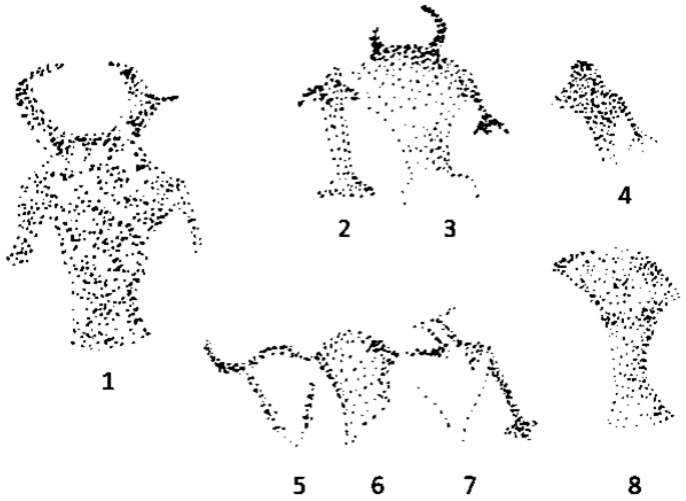
Panel 17



Panel 18

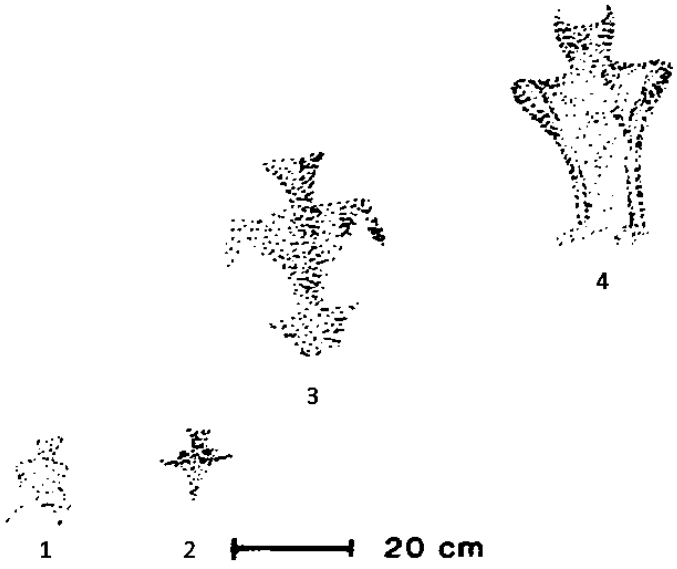
	 Panel 22	 Panel 23

42SV1934

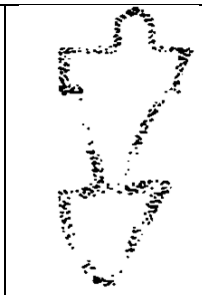


Panel 1

42SV1936



Panel 1:

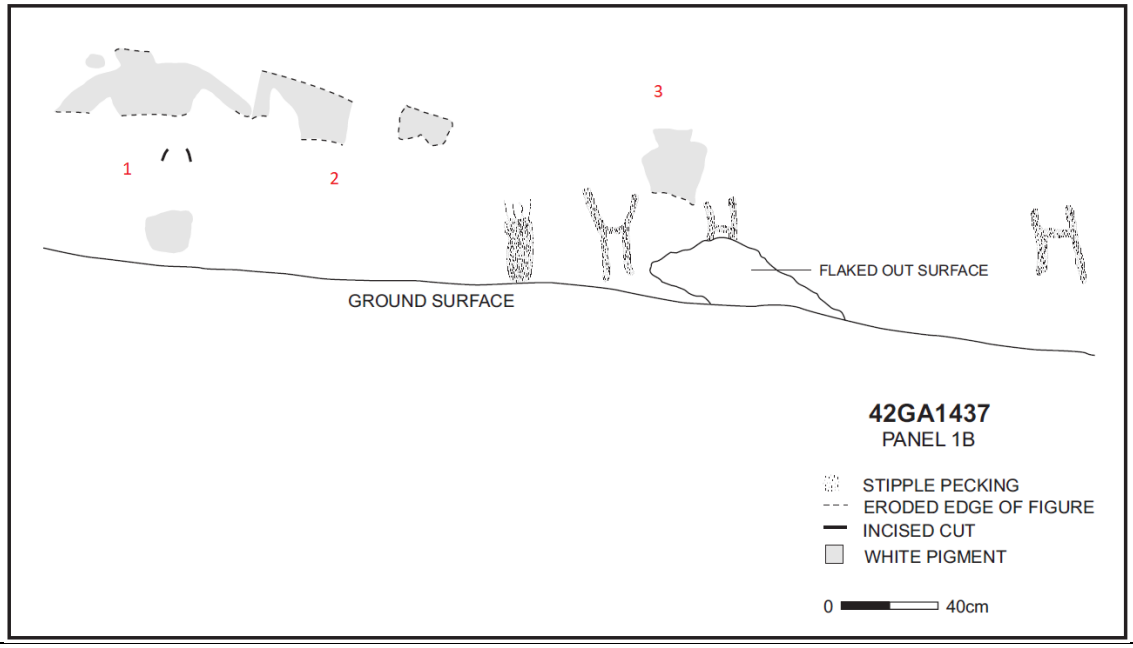
	 Panel 2	
42SV1937	 1 2 3 Panel 1	 Panel 2

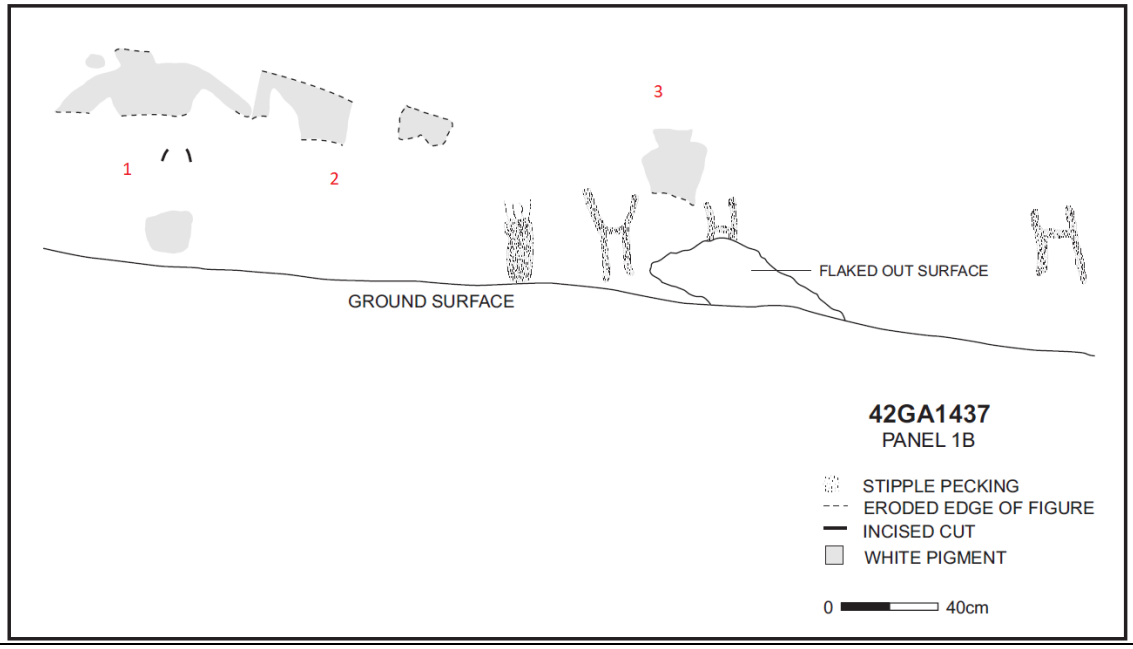
42SV1932

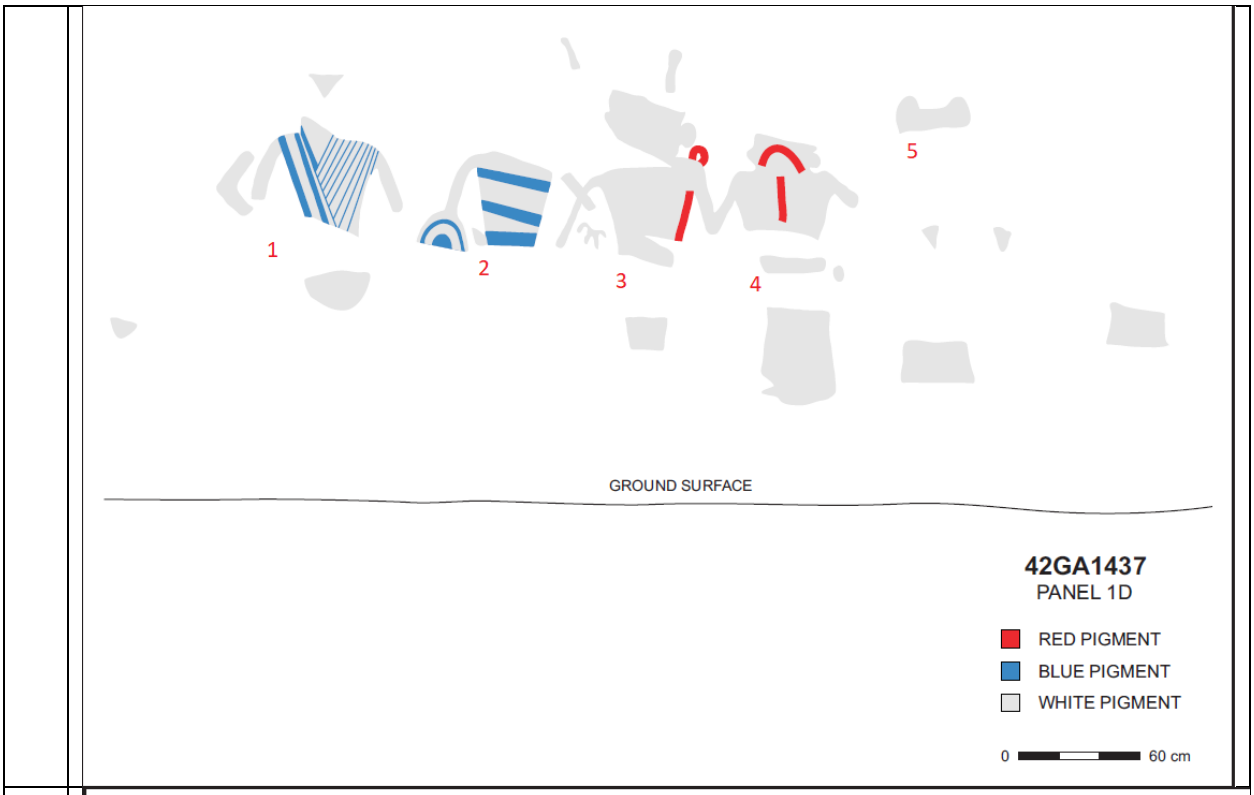
Panel 4 Panel 6

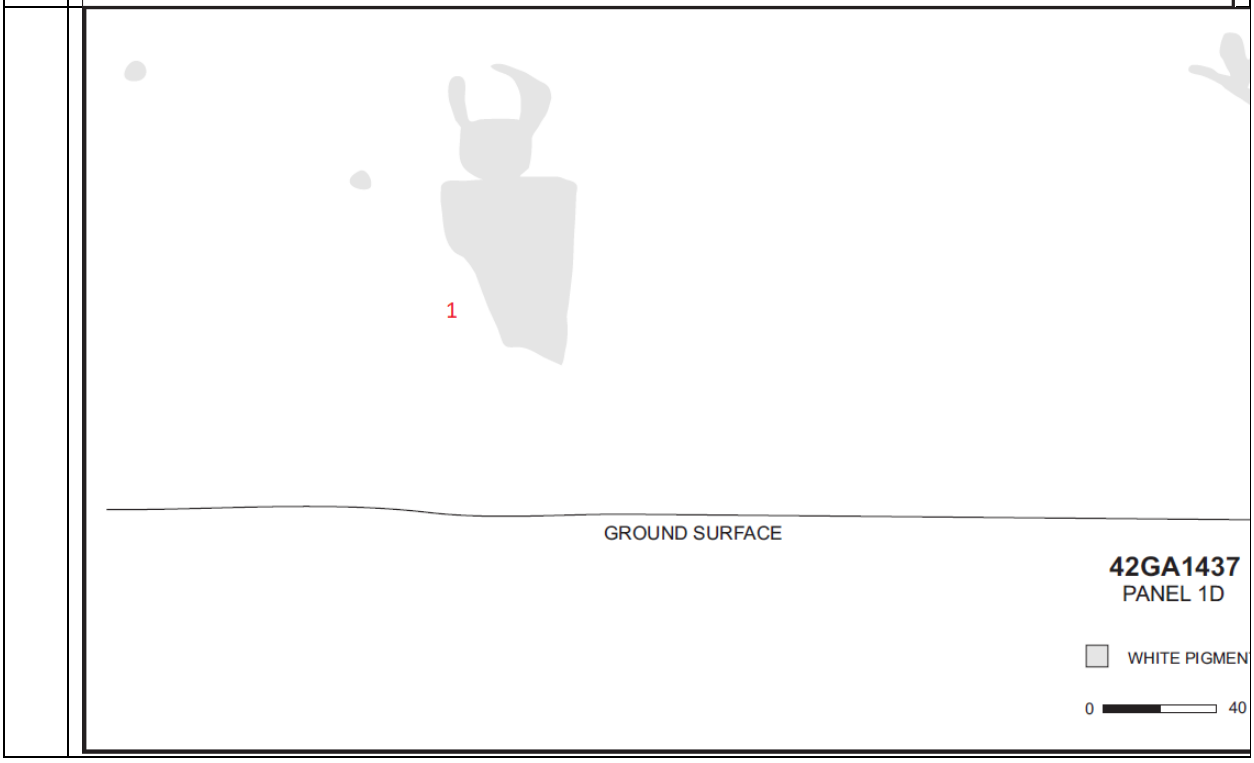
Grand Staircase-Escalante National Monument

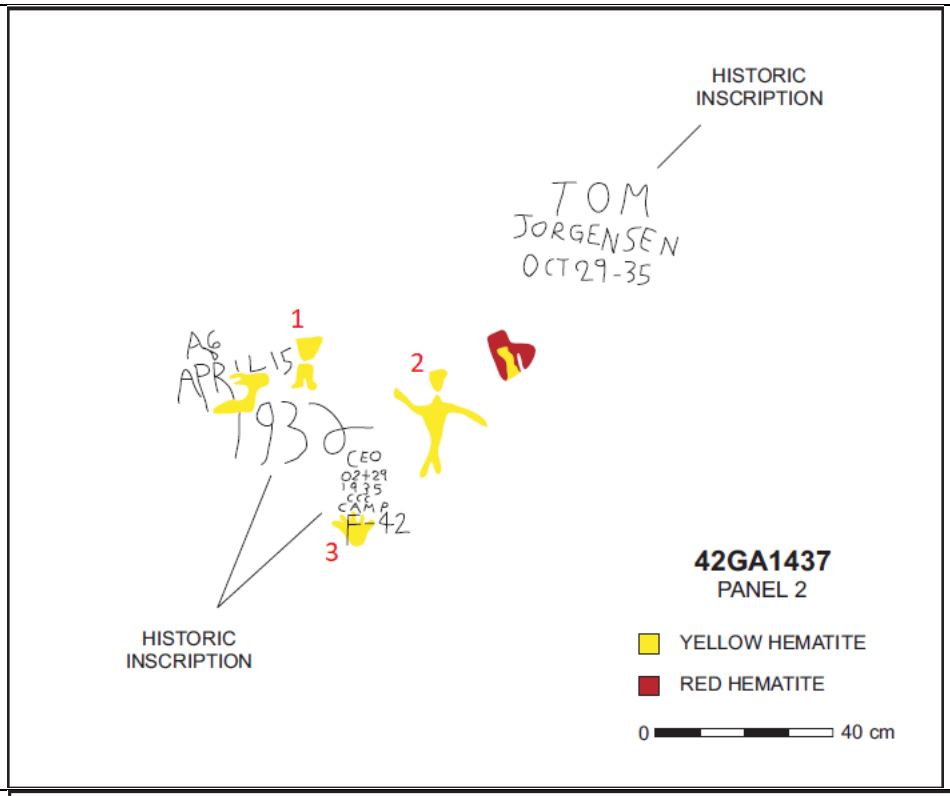
42GA1437

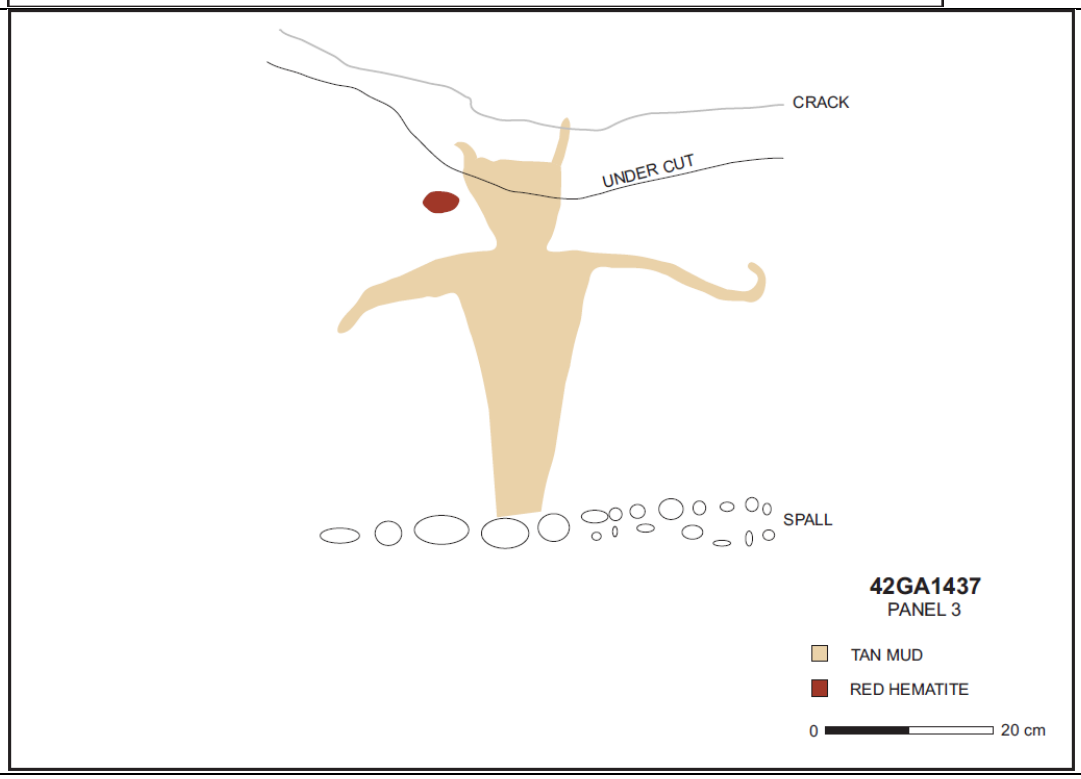




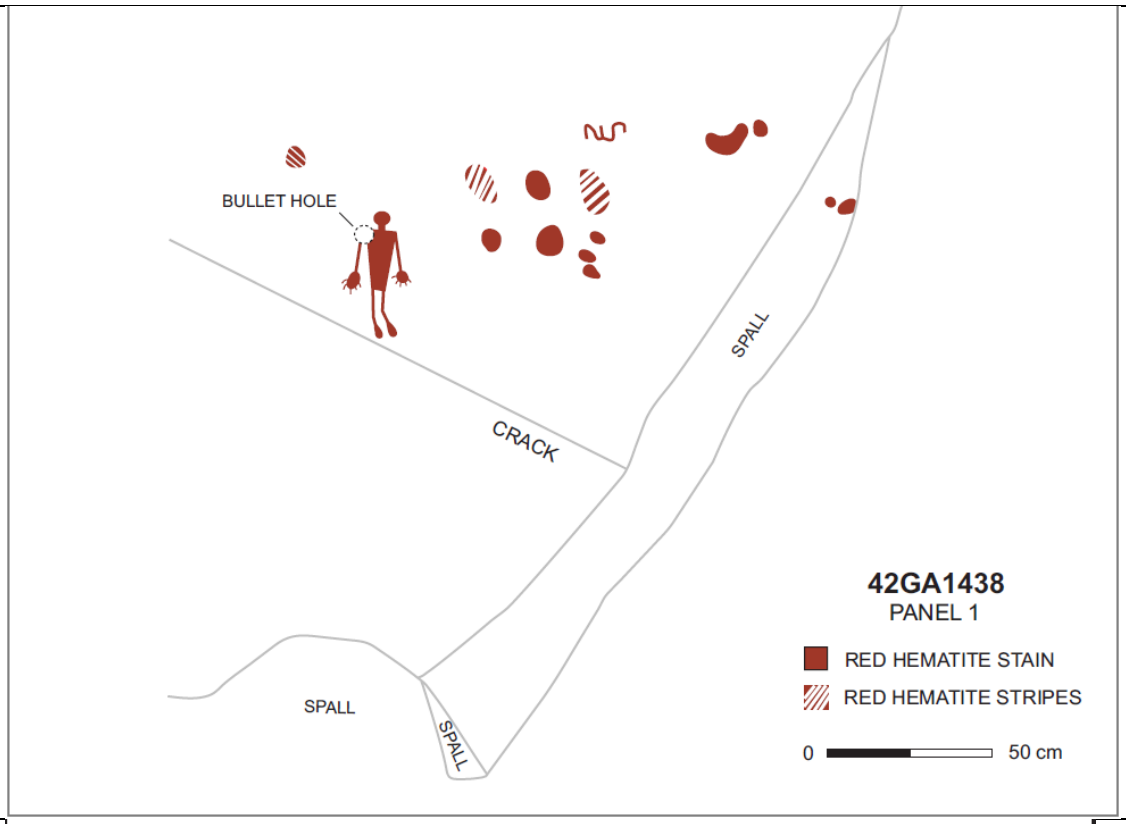

1
2
3
4
5
GROUND SURFACE
42GA1437
PANEL 1D
RED PIGMENT
BLUE PIGMENT
WHITE PIGMENT
0
60 cm


1
GROUND SURFACE
42GA1437
PANEL 1D
WHITE PIGMEN
0
40

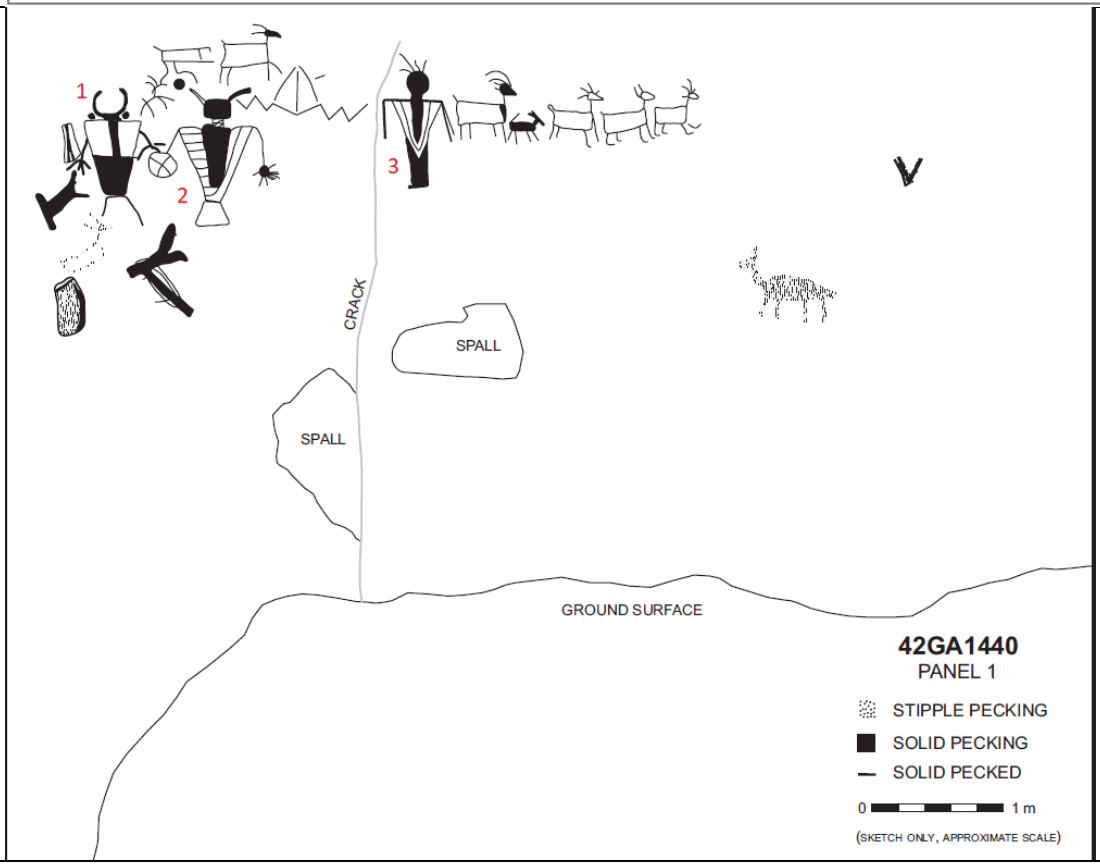

HISTORIC
INSCRIPTION
TOM
JORGENSEN
OCT 29-35
1
2
3
AG
APRIL 15
1937
CEO
02+29
1935
CAMP
F-42
HISTORIC
INSCRIPTION
42GA1437
PANEL 2
YELLOW HEMATITE
RED HEMATITE
0
40 cm

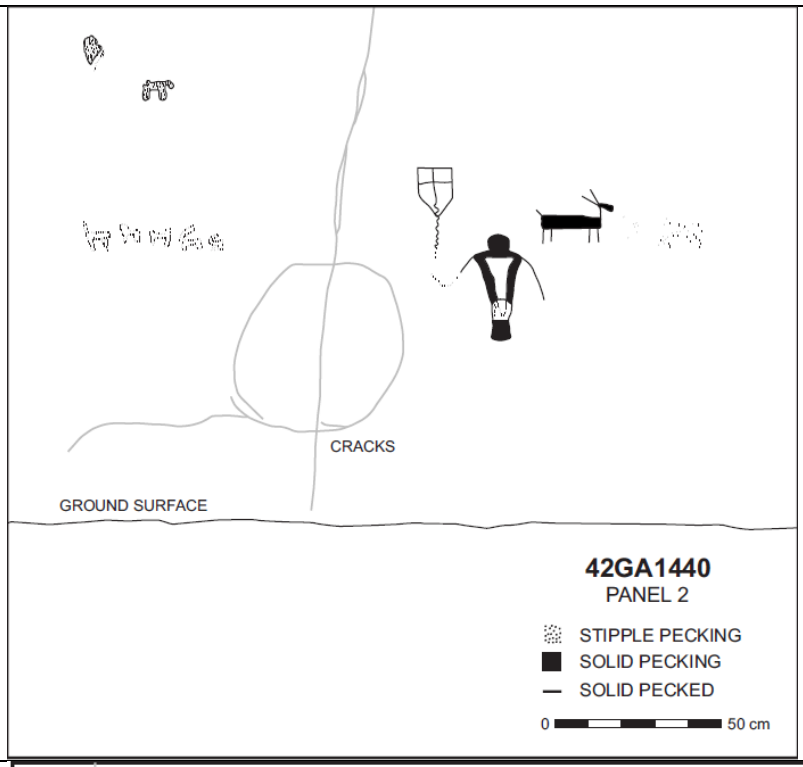

CRACK
UNDER CUT
SPALL
42GA1437
PANEL 3
TAN MUD
RED HEMATITE
0
20 cm

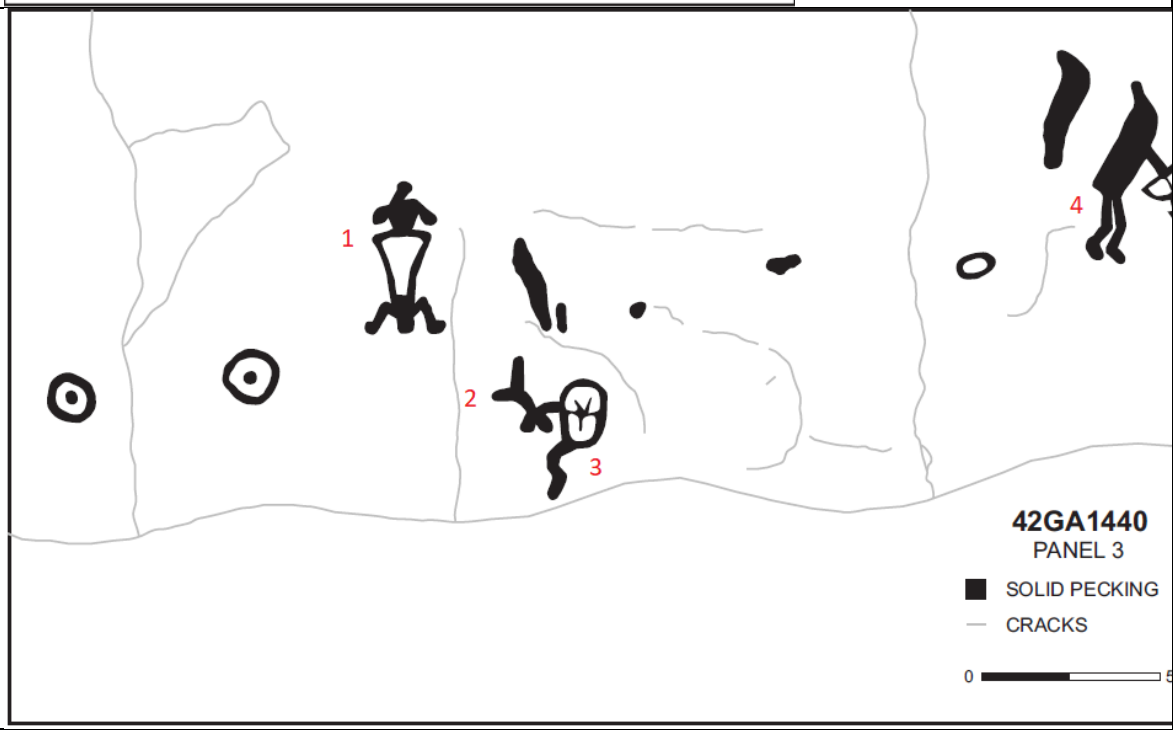
42GA1438

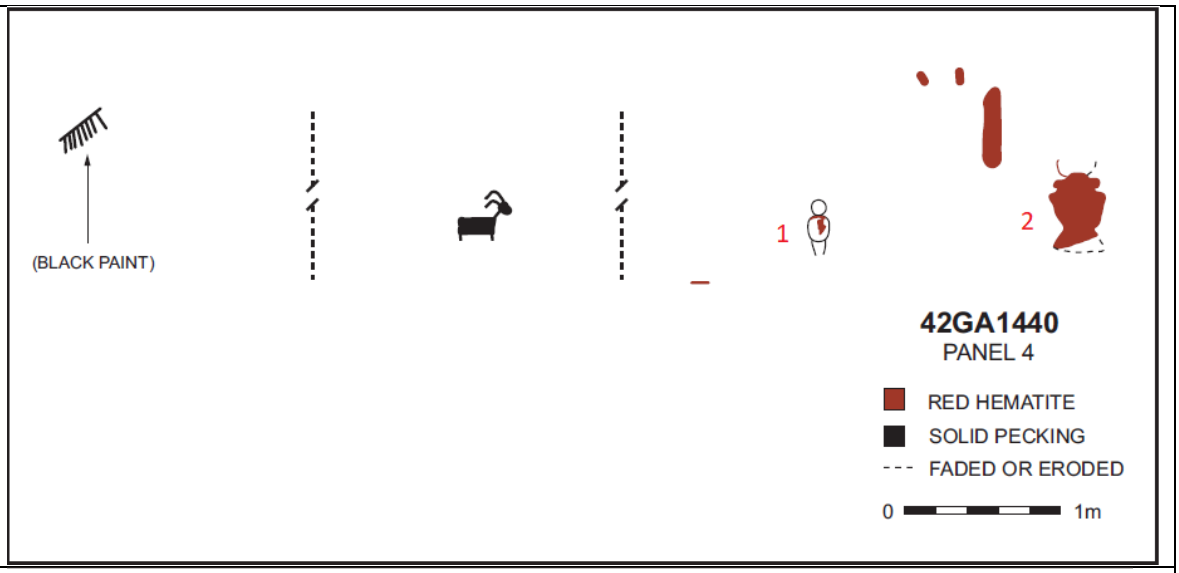


42GA1440

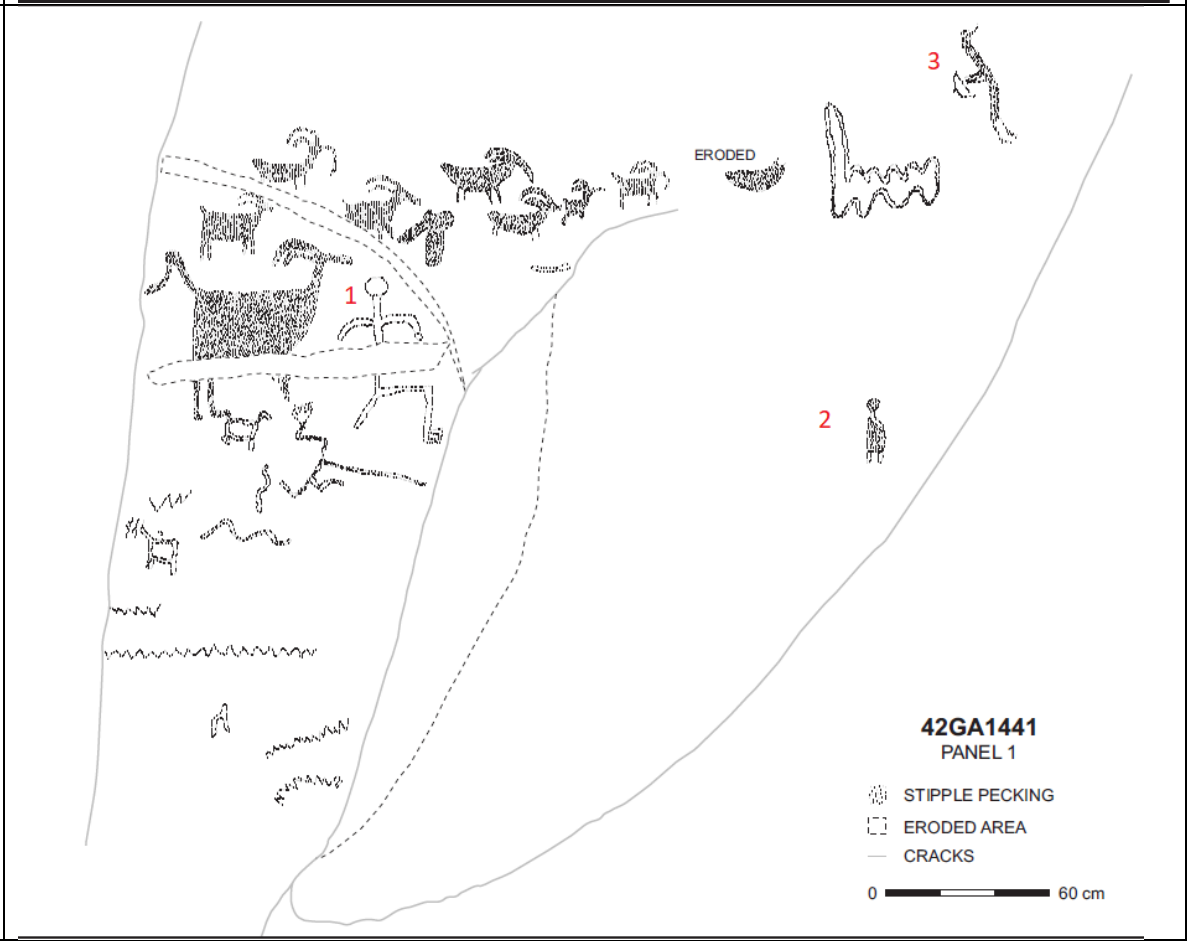


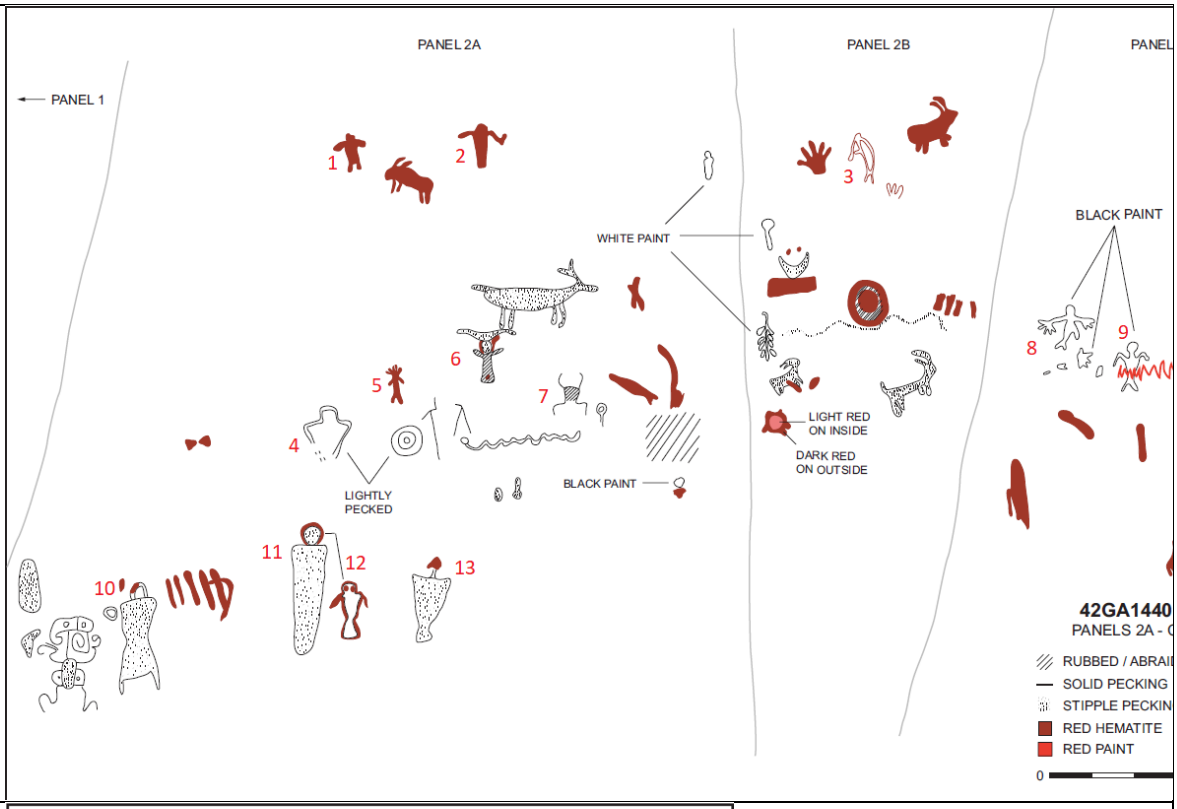

CRACKS
GROUND SURFACE
42GA1440
PANEL 2
STIPPLE PECKING
SOLID PECKING
SOLID PECKED
0
50 cm


1
2
3
4
42GA1440
PANEL 3
SOLID PECKING
CRACKS
0

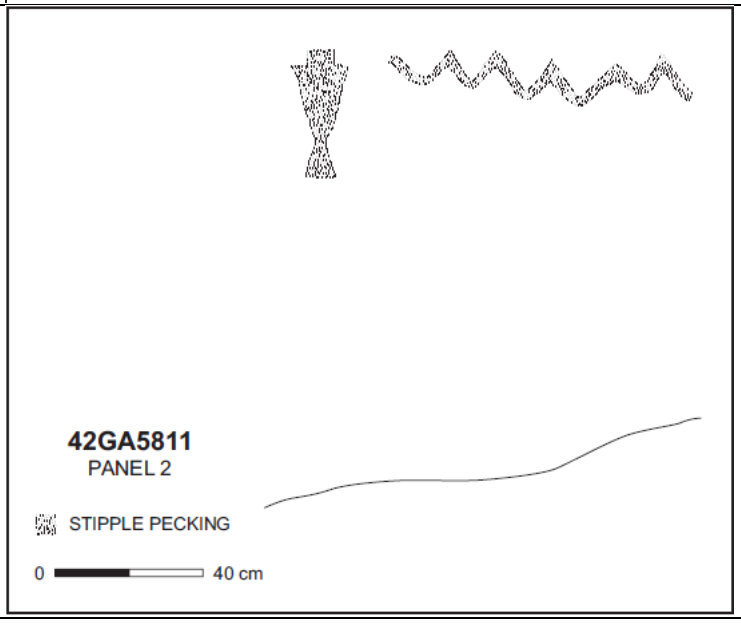

(BLACK PAINT)
1
2
42GA1440
PANEL 4
RED HEMATITE
SOLID PECKING
FADED OR ERODED
0
1m

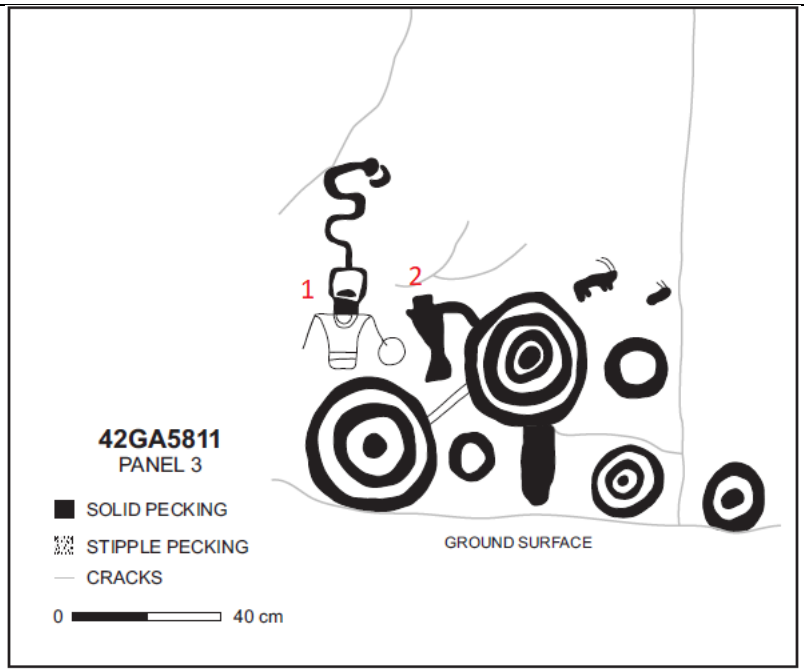
42GA1441

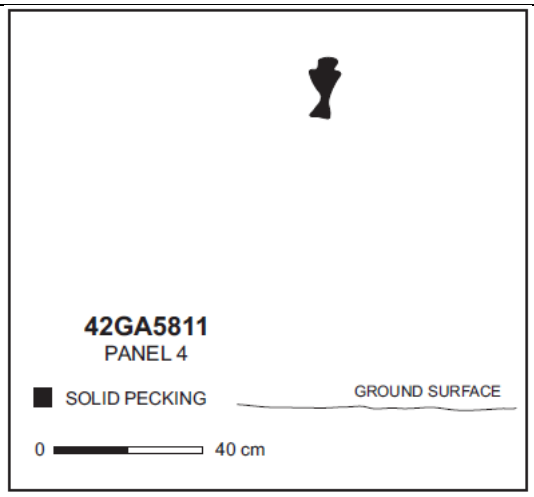

3
ERODED
1
2
42GA1441
PANEL 1
STIPPLE PECKING
ERODED AREA
CRACKS
0
60 cm


PANEL 2A
PANEL 2B
PANEL 1
WHITE PAINT
BLACK PAINT
LIGHTLY PECKED
LIGHT RED ON INSIDE
DARK RED ON OUTSIDE
42GA1440
RUBBED / ABRAI
SOLID PECKING
STIPPLE PECKIN
RED HEMATITE
RED PAINT
0

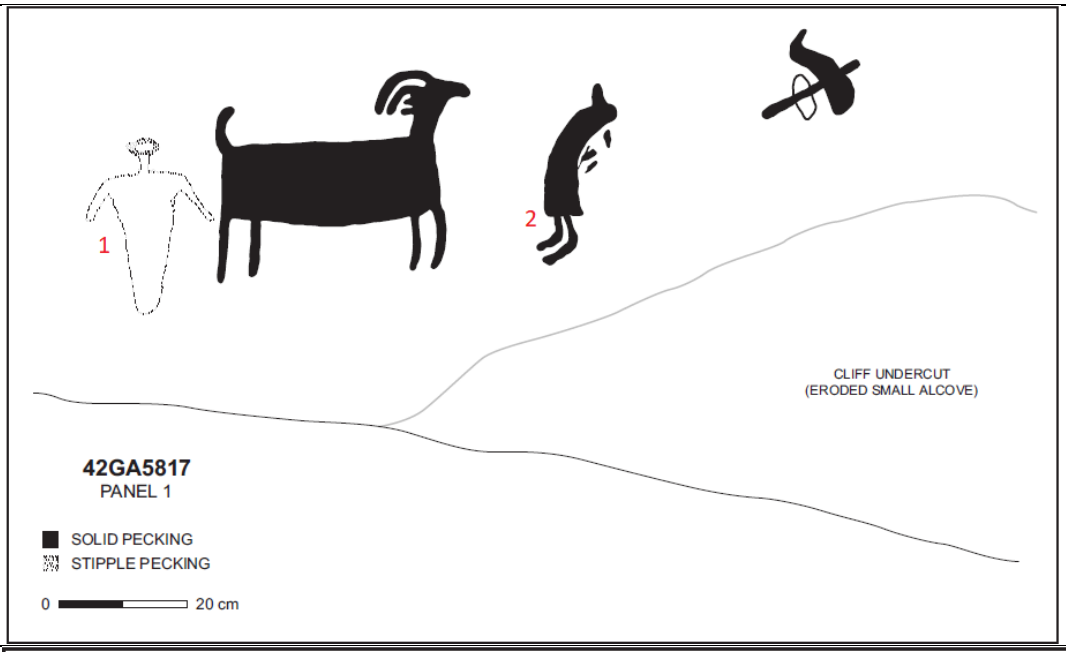
42GA5811


42GA5811
PANEL 2
STIPPLE PECKING
0
40 cm

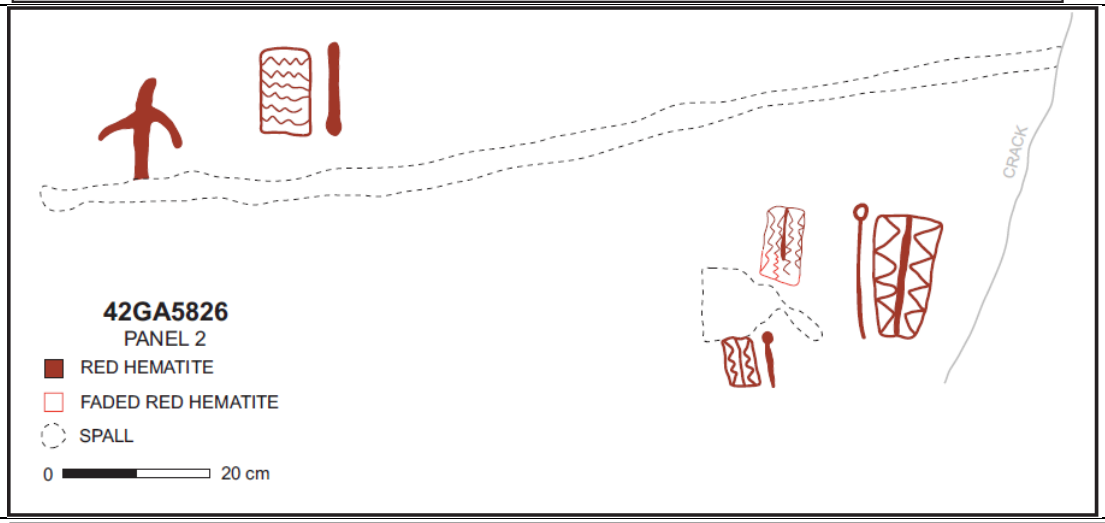

1
2
42GA5811
PANEL 3
SOLID PECKING
STIPPLE PECKING
CRACKS
0
40 cm
GROUND SURFACE

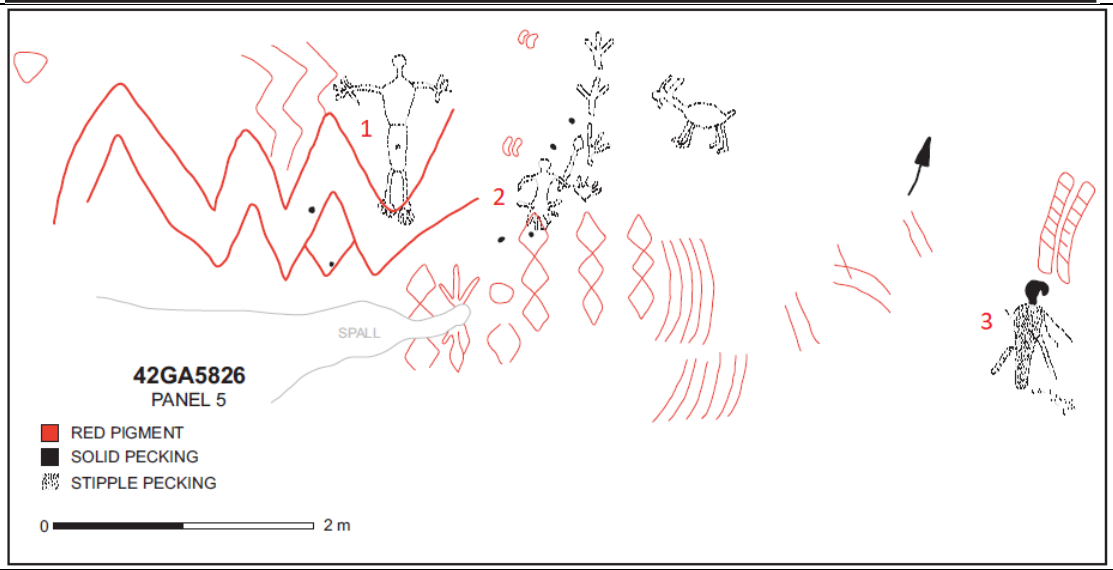

42GA5811
PANEL 4
SOLID PECKING
GROUND SURFACE
0
40 cm

42GA5817

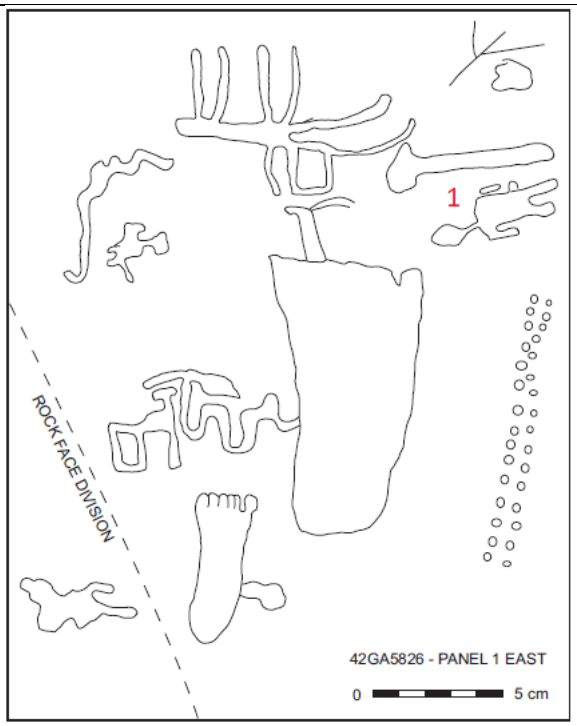


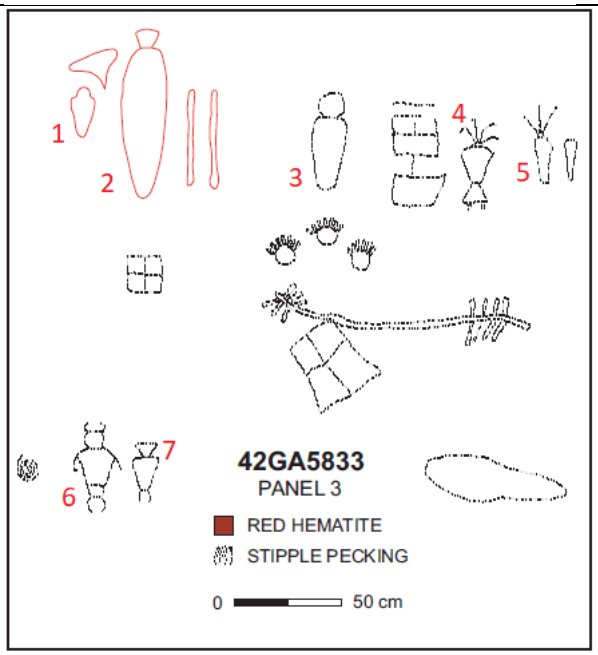
42GA5826

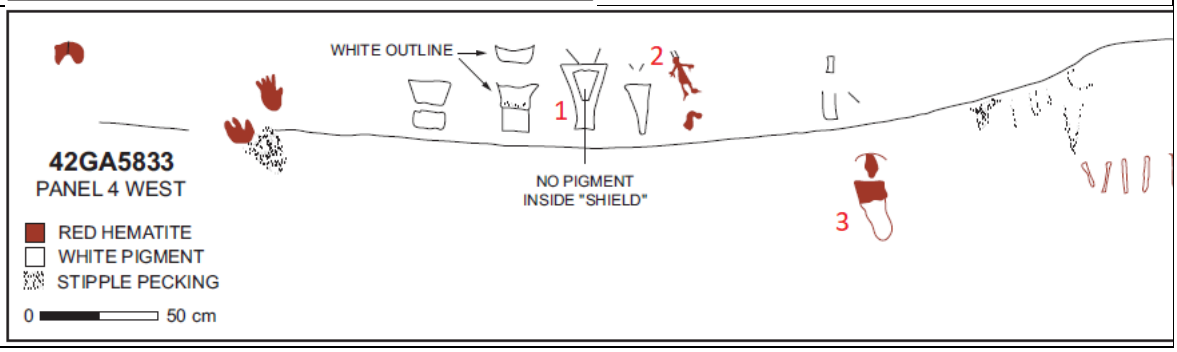


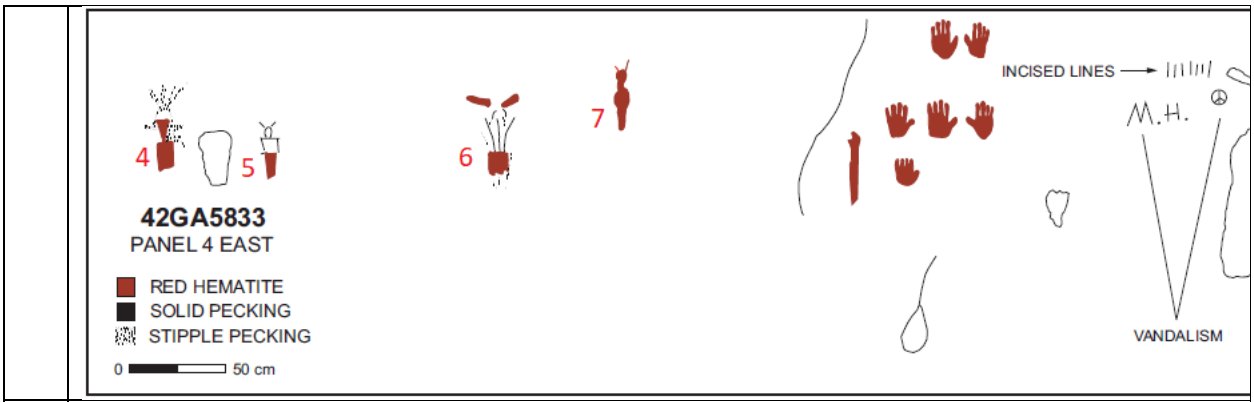


42GA5833

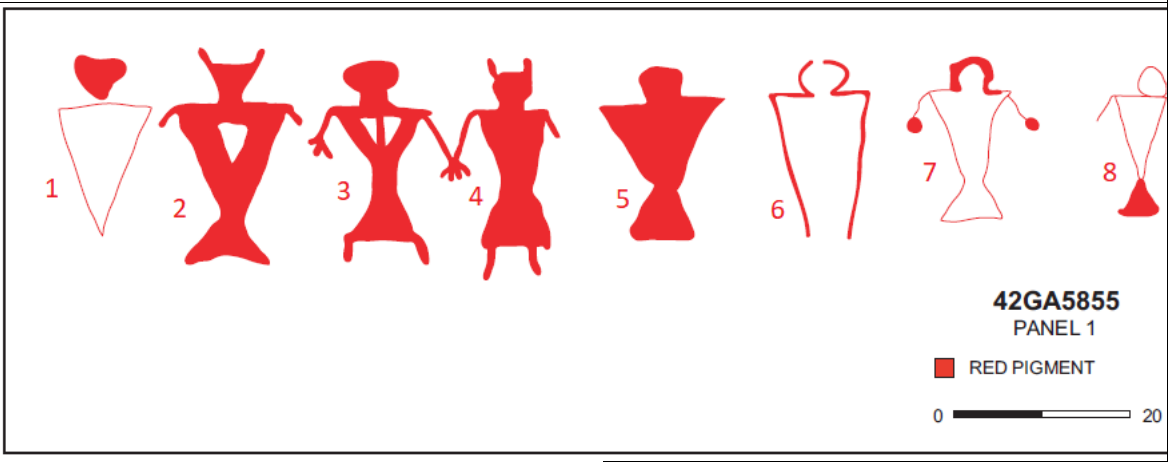

1
ROCK FACE DIVISION
42GA5826 - PANEL 1 EAST
0
5 cm


1
2
3
4
5
6
7
42GA5833
PANEL 3
RED HEMATITE
STIPPLE PECKING
0
50 cm

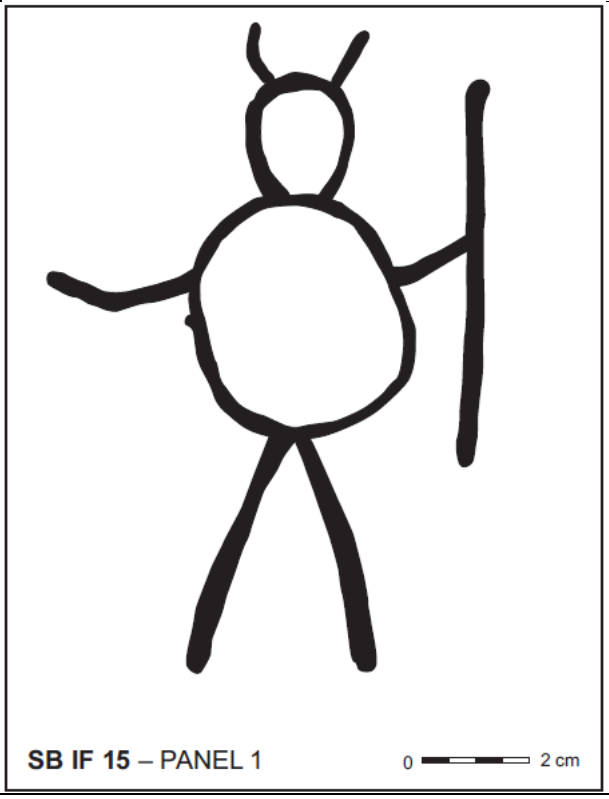

WHITE OUTLINE
1
2
3
NO PIGMENT
INSIDE "SHIELD"
42GA5833
PANEL 4 WEST
RED HEMATITE
WHITE PIGMENT
STIPPLE PECKING
0
50 cm



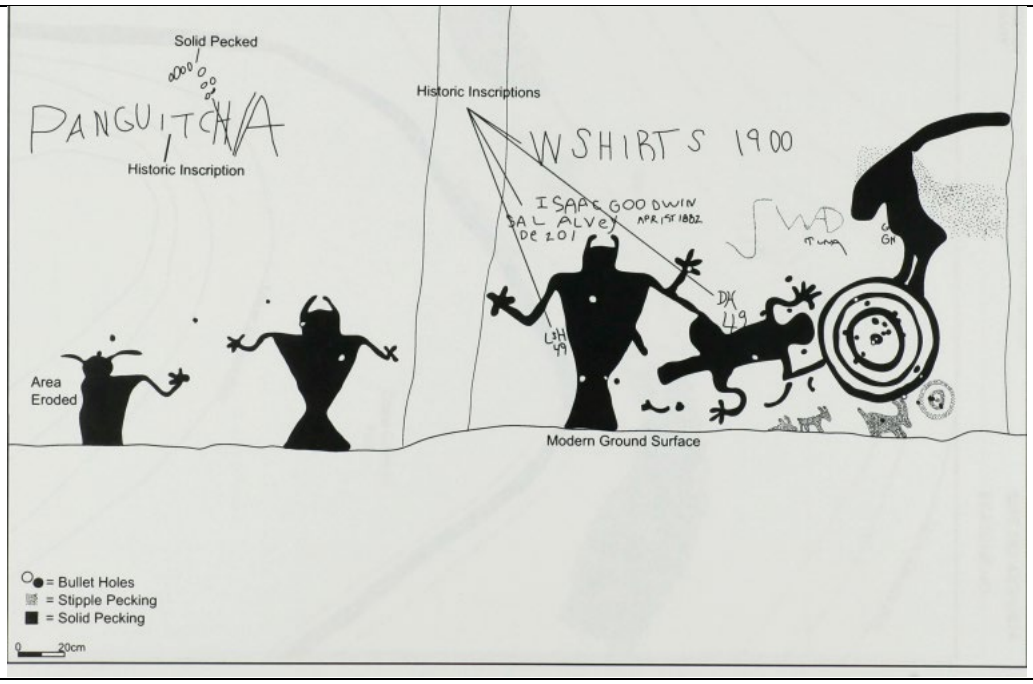
42GA5855



SB IF 15



42GA5814


Solid Pecked
PANGUITCHA
Historic Inscription
Historic Inscriptions
WSHIRTS 1900
ISAAC GOODWIN
SAL ALVE)
DE 201
Area
Eroded
Modern Ground Surface
= Bullet Holes
= Stipple Pecking
= Solid Pecking
0 20cm

Appendix C: Anthropomorph Coding

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1689.2:1	CCC	387632	4271026	Stick	Bucket	Present	Present	Absent
42SV1689.3:1	CCC	387632	4271030	Square/Rectangular	Bucket.FB	Present	Absent	Absent
42SV1689.5:1	CCC	387632	4271035	Square/Rectangular	Other	Present	Present	Absent
42SV1689.6:1	CCC	387632	4271039	Bucket	Bucket	Absent	Present	Absent
42SV1689.6:2	CCC	387632	4271039	Square/Rectangular	Triangle	Present	Present	Female
42SV1689.7:1	CCC	387632	4271043	Thumb	Rectangular	Present	Absent	Absent
42SV1689.7:2	CCC	387632	4271043	Circular/Oval	Other	Absent	Absent	Female
42SV1900.B2:1	CCC	388740	4271128	Square/Rectangular	Bucket.RB	Present	Present	Absent
42SV1900.B2:2	CCC	388740	4271128	Square/Rectangular	Triangle	Present	Present	Absent
42SV1900.B2:3	CCC	388740	4271128	Bucket	Bucket	Present	Present	Absent
42SV1900.B3:1	CCC	388745	4271120	Bucket	Triangle	Absent	Absent	Absent
42SV1904.4:1	CCC	387046	4271001	Square/Rectangular	Triangle	Absent	Absent	Absent
42SV1904.9:1	CCC	387056	4271022	Square/Rectangular	Bucket.RB	Absent	Present	Absent
42SV1904.9:2	CCC	387056	4271022	Square/Rectangular	Bucket	Present	Absent	Absent
42SV1904.10:1	CCC	387066	4271032	Square/Rectangular	Bucket	Present	Present	Female
42SV1905.2:1	CCC	387051	4271230	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1905.2:2	CCC	387051	4271230	Other	Stick	Present	Absent	Absent
42SV1906.2:1	CCC	387051	4271459	Absent	Bucket.FB	Present	Present	Female
42SV1906.6:1	CCC	387055	4271455	Thumb	Triangle	Absent	Present	Absent
42SV1906.6:2	CCC	387055	4271455	Bucket	Stick	Present	Present	Absent
42SV1907.1:1	CCC	386896	4271188	Bucket	Triangle	Present	Absent	Absent
42SV1907.B2:1	CCC	386891	4271200	Square/Rectangular	Bucket	Absent	Absent	Absent
42SV1907.B4:1	CCC	386876	4271193	Square/Rectangular	Bucket	Present	Absent	Absent
42SV1907:B5:1	CCC	386874	4271190	Thumb	Bucket	Present	Present	Absent
42SV1907:B7:1	CCC	386875	4271183	Thumb	Bucket	Present	Present	Absent
42SV1907.B8:1	CCC	386884	4271181	Square/Rectangular	Bucket	Present	Absent	Absent
42SV1907.B9:1	CCC	386864	4271179	Other	Bucket	Absent	Present	Absent
42SV1907.B10:1	CCC	386864	4271173	Bucket	Bucket	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1909.1:1	CCC	386860	4270962	Inv.Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.2:1	CCC	386850	4270960	Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.2:2	CCC	386850	4270960	Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.2:3	CCC	386850	4270960	Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.2:4	CCC	386850	4270960	Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.2:5	CCC	386850	4270960	Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.2:6	CCC	386850	4270960	Bucket	Bucket.FB	Present	Absent	Absent
42SV1909.B3:1	CCC	386781	4271060	Inv.Thumb	Other	Present	Present	Absent
42SV1909.B4:1	CCC	386773	4271059	Inv.Thumb	Other	Present	Present	Absent
42SV1909.B4:2	CCC	386773	4271059	Bucket	Other	Absent	Absent	Absent
42SV1909.B4:3	CCC	386773	4271059	Thumb	Bucket	Present	Present	Absent
42SV1909.B6:1	CCC	386762	4271060	Bucket	Bucket	Present	Absent	Absent
42SV1909.B6:2	CCC	386762	4271060	Other	Oval	Present	Present	Absent
42SV1909.B6:3	CCC	386762	4271060	Circular/Oval	Triangle	Absent	Absent	Absent
42SV1909.C1:1	CCC	386703	4271037	Bucket	Triangle	Absent	Absent	Absent
42SV1909.C5:1	CCC	386690	4271036	Square/Rectangular	Triangle	Present	Absent	Absent
42SV1909.C5:2	CCC	386690	4271036	Inv.Thumb	Bucket	Present	Absent	Absent
42SV1909.C5:3	CCC	386690	4271036	Inv.Bucket	Other	Present	Absent	Absent
42SV1909.C6:1	CCC	386695	4271031	Irregular	Bucket	Absent	Absent	Absent
42SV1909.20:1	CCC	386500	4271059	Bucket	Bucket.RB	Absent	Present	Absent
42SV1909.C21:1	CCC	386619	4271078	Irregular	Rectangular	Present	Present	Absent
42SV1909.C21:2	CCC	386619	4271078	Thumb	Rectangular	Present	Absent	Absent
42SV1909.C21:3	CCC	386619	4271078	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1909.C21:4	CCC	386619	4271078	Circular/Oval	Rectangular	Present	Present	Absent
42SV1909.C21:5	CCC	386619	4271078	Bucket	Bucket	Present	Absent	Absent
42SV1909.C22:1	CCC	386639	4271069	Inv.Thumb	Other	Present	Absent	Absent
42SV1909.D3:1	CCC	386749	4271134	Square/Rectangular	Triangle	Absent	Absent	Female
42SV1911.1:1	CCC	386449	4271247	Triangle	Bucket.FB	Present	Absent	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1912.2a:1	CCC	386121	4271047	Circular/Oval	Rectangular	Present	Present	Absent
42SV1912.2a:2	CCC	386121	4271047	Circular/Oval	Oval	Present	Present	Absent
42SV1912.3:1	CCC	386116	4271052	Irregular	Other	Present	Present	Absent
42SV1912.3:2	CCC	386116	4271052	Absent	Rectangular	Present	Present	Absent
42SV1912.C2:1	CCC	386103	4271117	Irregular	Stick	Present	Present	Absent
42SV1912.C3:1	CCC	386104	4271123	Irregular	Triangle	Present	Absent	Absent
42SV1912.C8:1	CCC	386129	4271129	Square/Rectangular	Bucket.RB	Absent	Absent	Absent
42SV1912.C8:2	CCC	386129	4271129	Inv.Thumb	Bucket.RB	Absent	Absent	Absent
42SV1912.C8:3	CCC	386129	4271129	Inv.Thumb	Bucket.RB	Absent	Absent	Absent
42SV1912.C8:4	CCC	386129	4271129	Inv.Thumb	Bucket.RB	Absent	Absent	Absent
42SV1912.C8:5	CCC	386129	4271129	Square/Rectangular	Bucket.RB	Absent	Absent	Absent
42SV1912.C8:6	CCC	386129	4271129	Square/Rectangular	Bucket.RB	Absent	Absent	Absent
42SV1912.C8:7	CCC	386129	4271129	Irregular	Bucket	Present	Present	Absent
42SV1912.C8:8	CCC	386129	4271129	Square/Rectangular	Bucket.FB	Present	Present	Absent
42SV1913.1:1	CCC	386229	4270695	Thumb	Bucket.FB	Present	Present	Absent
42SV1913.1:2	CCC	386229	4270695	Thumb	Rectangular	Present	Present	Absent
42SV1914.2:1	CCC	385719	4270956	Bucket	Bucket	Present	Present	Absent
42SV1914.3:1	CCC	385711	4270951	Circular/Oval	Other	Present	Present	Absent
42SV1914.4:1	CCC	385696	4270950	Inv.Thumb	Stick	Present	Present	Absent
42SV1914.4:2	CCC	385696	4270950	Absent	Bucket.RB	Absent	Absent	Absent
42SV1914.5:1	CCC	385693	4270946	Inv.Triangle	Bucket	Present	Present	Absent
42SV1914.11:1	CCC	385654	4270936	Irregular	Circular	Present	Present	Absent
42SV1914.17:1	CCC	385564	4270968	Bucket	Triangle	Present	Present	Absent
42SV1915.1:1	CCC	385310	4270750	Circular/Oval	Bucket.RB	Present	Absent	Absent
42SV1915.1:2	CCC	385310	4270750	Irregular	Bucket.FB	Present	Present	Absent
42SV1918.3:1	CCC	384487	4271002	Irregular	Bucket	Present	Present	Male
42SV1918.4:1	CCC	384481	4271001	Irregular	Circular	Present	Present	Absent
42SV1918.7:1	CCC	384477	4271001	Square/Rectangular	Bucket	Absent	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1918.8:1	CCC	384472	4270997	Square/Rectangular	Bucket	Present	Present	Absent
42SV1918.8:2	CCC	384472	4270997	Absent	Other	Present	Present	Absent
42SV1918.8:3	CCC	384472	4270997	Bucket	Rectangular	Present	Absent	Absent
42SV1918.9:1	CCC	384467	4270996	Inv.Bucket	Bucket	Present	Present	Absent
42SV1918.9:2	CCC	384467	4270996	Irregular	Bucket	Present	Present	Absent
42SV1918.9:3	CCC	384467	4270996	Inv.Triangle	Other	Present	Absent	Absent
42SV1918.9:4	CCC	384467	4270996	Inv.Bucket	Triangle	Present	Absent	Absent
42SV1918.9:5	CCC	384467	4270996	Square/Rectangular	Triangle	Absent	Absent	Absent
42SV1918.9:6	CCC	384467	4270996	Bucket	Triangle	Present	Absent	Absent
42SV1918.9:7	CCC	384467	4270996	Circular/Oval	Bucket	Present	Absent	Absent
42SV1918.9:8	CCC	384467	4270996	Irregular	Bucket.RB	Absent	Absent	Absent
42SV1918.9:9	CCC	384467	4270996	Bucket	Bucket.RB	Absent	Absent	Absent
42SV1918.9:10	CCC	384467	4270996	Irregular	Bucket	Present	Present	Absent
42SV1918.10:1	CCC	384459	4270997	Irregular	Bucket	Absent	Absent	Absent
42SV1918.11:1	CCC	384457	4270993	Irregular	Bucket.RB	Present	Absent	Absent
42SV1918.12:1	CCC	384454	4270997	Square/Rectangular	Other	Present	Absent	Absent
42SV1918.13:1	CCC	384450	4270993	Triangle	Other	Absent	Present	Absent
42SV1918.13:2	CCC	384450	4270993	Circular/Oval	Bucket.RB	Present	Present	Absent
42SV1918.13:3	CCC	384450	4270993	Circular/Oval	Bucket.RB	Absent	Present	Absent
42SV1918.14:1	CCC	384444	4270993	Bucket	Bucket	Absent	Absent	Absent
42SV1918.15:1	CCC	384427	4270993	Bucket	Bucket	Absent	Absent	Absent
42SV1918.16:1	CCC	384421	4270990	Thumb	Triangle	Absent	Present	Absent
42SV1918.16:2	CCC	384421	4270990	Inv.Triangle	Triangle	Absent	Present	Absent
42SV1918.16:3	CCC	384421	4270990	Bucket	Bucket	Present	Present	Absent
42SV1918.19:1	CCC	384418	4270987	Irregular	Triangle	Absent	Present	Absent
42SV1918.19:2	CCC	384418	4270987	Square/Rectangular	Bucket	Present	Present	Absent
42SV1918.22:1	CCC	384413	4270989	Inv.Thumb	Stick	Present	Present	Absent
42SV1918.22:2	CCC	384413	4270989	Square/Rectangular	Bucket.RB	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1918.22:3	CCC	384413	4270989	Inv.Thumb	Bucket	Present	Absent	Absent
42SV1918.22:4	CCC	384413	4270989	Irregular	Bucket.FB	Absent	Absent	Absent
42SV1918.22:5	CCC	384413	4270989	Absent	Rectangular	Present	Present	Male
42SV1918.22:6	CCC	384413	4270989	Stick	Bucket.FB	Present	Present	Absent
42SV1918.22:7	CCC	384413	4270989	Thumb	Triangle	Absent	Absent	Absent
42SV1918.22:8	CCC	384413	4270989	Bucket	Triangle	Present	Absent	Absent
42SV1918.22:9	CCC	384413	4270989	Irregular	Stick	Present	Present	Absent
42SV1918.22:10	CCC	384413	4270989	Inv.Thumb	Stick	Present	Present	Absent
42SV1918.22:11	CCC	384413	4270989	Bucket	Bucket.RB	Present	Absent	Absent
42SV1918.23:1	CCC	383309	4270986	Bucket	Triangle	Absent	Present	Absent
42SV1918.23:2	CCC	384406	4270982	Square/Rectangular	Triangle	Present	Present	Male
42SV1918.26:1	CCC	384404	4270978	Bucket	Triangle	Present	Present	Male
42SV1918.27:1	CCC	384404	4270978	Square/Rectangular	Triangle	Absent	Absent	Absent
42SV1918.27:2	CCC	384404	4270978	Bucket	Bucket	Absent	Absent	Absent
42SV1918.27:3	CCC	384404	4270978	Irregular	Triangle	Present	Absent	Absent
42SV1918.28:1	CCC	384395	4270978	Bucket	Triangle	Absent	Absent	Absent
42SV1918.28:2	CCC	384395	4270978	Irregular	Bucket.RB	Present	Present	Absent
42SV1918.28:3	CCC	384395	4270978	Square/Rectangular	Bucket	Present	Present	Absent
42SV1918.28:4	CCC	384395	4270978	Square/Rectangular	Bucket	Present	Present	Absent
42SV1918.29:1	CCC	384393	4270974	Bucket	Bucket.RB	Absent	Present	Absent
42SV1918.31:1	CCC	384369	4270974	Square/Rectangular	Bucket.RB	Present	Absent	Absent
42SV1918.31:2	CCC	384369	4270974	Thumb	Bucket.FB	Present	Absent	Absent
42SV1918.34:1	CCC	384363	4270980	Thumb	Rectangular	Present	Present	Male
42SV1918.34:2	CCC	384363	4270980	Irregular	Other	Absent	Present	Absent
42SV1918.34:3	CCC	384363	4270980	Irregular	Other	Absent	Present	Absent
42SV1918.35:1	CCC	384409	4271006	Stick	Circular	Present	Present	Absent
42SV1918.36:1	CCC	384419	4271007	Square/Rectangular	Bucket	Present	Present	Absent
42SV1918.37:1	CCC	384425	4271010	Square/Rectangular	Bucket	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1918.56:1	CCC	384465	4271011	Thumb	Other	Present	Present	Absent
42SV1918.60:1	CCC	384481	4271023	Thumb	Bucket	Absent	Present	Male
42SV1918.60:2	CCC	384481	4271023	Thumb	Rectangular	Present	Present	Absent
42SV1918.60:3	CCC	384481	4271023	Square/Rectangular	Bucket	Present	Present	Absent
42SV1918.60:4	CCC	384481	4271023	Irregular	Rectangular	Present	Present	Absent
42SV1918.60:5	CCC	384481	4271023	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1918.60:6	CCC	384481	4271023	Irregular	Absent	Absent	Absent	Absent
42SV1918.60:7	CCC	384481	4271023	Irregular	Rectangular	Present	Present	Absent
42SV1918.61:1	CCC	384467	4271010	Bucket	Bucket.FB	Absent	Present	Absent
42SV1918.61:2	CCC	384467	4271010	Bucket	Bucket.FB	Absent	Present	Absent
42SV1918.B4:1	CCC	384333	4270954	Thumb	Triangle	Absent	Absent	Absent
42SV1918.B4:2	CCC	384333	4270954	Thumb	Bucket	Present	Present	Absent
42SV1918.B4:3	CCC	384333	4270954	Bucket	Bucket.FB	Present	Absent	Absent
42SV1918.B4:4	CCC	384333	4270954	Thumb	Bucket	Present	Present	Absent
42SV1919.1:1	CCC	384690	4270758	Bucket	Bucket	Present	Present	Absent
42SV1919.2:1	CCC	384692	4270756	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1921.A5:1	CCC	383940	4270850	Stick	Rectangular	Present	Present	Absent
42SV1921.A5:2	CCC	383940	4270850	Stick	Rectangular	Present	Present	Absent
42SV1922.C2:1	CCC	383952	4271013	Square/Rectangular	Bucket	Present	Absent	Absent
42SV1923.9:1	CCC	383717	4270780	Thumb	Rectangular	Present	Present	Male
42SV1923.9:2	CCC	383717	4270780	Circular/Oval	Other	Present	Present	Absent
42SV1923.9:3	CCC	383717	4270780	Thumb	Rectangular	Present	Present	Absent
42SV1923.B10:1	CCC	383641	4270774	Circular/Oval	Stick	Present	Present	Male
42SV1923.B10:2	CCC	383641	4270774	Square/Rectangular	Other	Present	Present	Male
42SV1923.B10:3	CCC	383641	4270774	Irregular	Stick	Present	Present	Absent
42SV1923.B12:1	CCC	387642	4270781	Bucket	Triangle	Absent	Absent	Absent
42SV1923.B13:1	CCC	383642	4270795	Thumb	Bucket.FB	Present	Present	Absent
42SV1923.B14:1	CCC	383648	4270800	Inv.Thumb	Bucket.RB	Present	Absent	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1923.B16:1	CCC	383653	4270800	Inv.Thumb	Bucket	Present	Present	Absent
42SV1923.B18:1	CCC	383672	4270764	Bucket	Other	Present	Present	Absent
42SV1923.B21:1	CCC	383661	4270794	Circular/Oval	Bucket	Present	Present	Absent
42SV1923.B23:1	CCC	383665	4270820	Inv.Thumb	Bucket.FB	Present	Absent	Absent
42SV1923.B23:2	CCC	383665	4270820	Circular/Oval	Triangle	Present	Absent	Absent
42SV1923.B24:1	CCC	383670	4270830	Square/Rectangular	Triangle	Absent	Absent	Absent
42SV1923.B28:1	CCC	383677	4270835	Stick	Other	Present	Present	Absent
42SV1923.B28:2	CCC	383677	4270835	Square/Rectangular	Other	Present	Present	Absent
42SV1923.B29:1	CCC	383680	4270840	Square/Rectangular	Triangle	Present	Absent	Absent
42SV1923.B30:1	CCC	383684	4270844	Bucket	Bucket	Absent	Absent	Absent
42SV1923.C1:1	CCC	383729	4270864	Bucket	Triangle	Absent	Absent	Absent
42SV1923.C8:1	CCC	383710	4270870	Inv.Triangle	Bucket	Absent	Absent	Absent
42SV1923.C9a:1	CCC	383705	4270870	Thumb	Rectangular	Present	Absent	Absent
42SV1923.C9a:2	CCC	383705	4270870	Thumb	Rectangular	Present	Present	Absent
42SV1923.C9a:3	CCC	383705	4270870	Thumb	Rectangular	Present	Absent	Absent
42SV1923.C9a:4	CCC	383705	4270870	Stick	Stick	Present	Present	Absent
42SV1923.C9a:5	CCC	383705	4270870	Stick	Oval	Present	Present	Male
42SV1923.C11:1	CCC	383727	4270893	Stick	Bucket	Present	Present	Absent
42SV1923.C12:1	CCC	383734	4270903	Circular/Oval	Other	Absent	Absent	Absent
42SV1923.C12:1	CCC	383734	4270903	Square/Rectangular	Bucket.RB	Absent	Absent	Absent
42SV1923.C16b:1	CCC	383746	4270922	Bucket	Bucket	Absent	Absent	Absent
42SV1923.C17:1	CCC	383769	4270930	Circular/Oval	Bucket	Present	Present	Absent
42SV1923.C17:2	CCC	383769	4270930	Circular/Oval	Bucket	Present	Absent	Absent
42SV1923.C17:3	CCC	383769	4270930	Circular/Oval	Rectangular	Present	Present	Absent
42SV1923.C18:1	CCC	383776	4270938	Irregular	Other	Absent	Present	Absent
42SV1923.C20:1	CCC	383784	4270943	Bucket	Bucket	Present	Absent	Absent
42SV1923.C20:2	CCC	383784	4270943	Circular/Oval	Triangle	Absent	Absent	Absent
42SV1924.A2:1	CCC	383743	4270699	Irregular	Stick	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1924.A5:1	CCC	387625	4270560	Irregular	Stick	Present	Absent	Absent
42SV1924.A5:2	CCC	387625	4270560	Irregular	Stick	Present	Present	Absent
42SV1925.A2:1	CCC	383620	4270540	Stick	Other	Present	Present	Absent
42SV1925.A2:2	CCC	383620	4270540	Circular/Oval	Triangle	Absent	Present	Absent
42SV1926.1:1	CCC	383244	4270750	Triangle	Triangle	Absent	Absent	Absent
42SV1926.4:1	CCC	383229	4270747	Stick	Stick	Present	Present	Absent
42SV1926.12:1	CCC	383188	4270744	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1926.15:1	CCC	383181	4270750	Thumb	Bucket.FB	Absent	Absent	Absent
42SV1926.15:2	CCC	383181	4270750	Square/Rectangular	Bucket.RB	Absent	Absent	Absent
42SV1926.15:3	CCC	383181	4270750	Bucket	Bucket	Present	Absent	Absent
42SV1926.15:4	CCC	383181	4270750	Stick	Stick	Present	Present	Absent
42SV1926.16:1	CCC	383173	4270746	Inv.Bucket	Triangle	Absent	Present	Absent
42SV1926.17:1	CCC	383217	4270765	Irregular	Bucket.RB	Present	Present	Absent
42SV1927.B2:1	CCC	382976	4270682	Square/Rectangular	Bucket.RB	Absent	Present	Absent
42SV1927.B7:1	CCC	382945	4270698	Thumb	Rectangular	Present	Present	Absent
42SV1927.B9:1	CCC	382938	4270699	Bucket	Bucket.RB	Present	Present	Male
42SV1927.B9:2	CCC	382938	4270699	Circular/Oval	Other	Present	Present	Absent
42SV1927.B9:3	CCC	382938	4270699	Circular/Oval	Bucket	Present	Present	Male
42SV1927.B11:1	CCC	382925	4270703	Stick	Circular	Present	Present	Absent
42SV1927.B12:1	CCC	382921	4270701	Circular/Oval	Bucket	Absent	Present	Absent
42SV1927.B13:1	CCC	382917	4270698	Absent	Bucket	Present	Present	Absent
42SV1927.B13:2	CCC	382917	4270698	Circular/Oval	Circular	Present	Present	Absent
42SV1927.B13:3	CCC	382917	4270698	Inv.Triangle	Other	Present	Present	Absent
42SV1927.B15:1	CCC	382904	4270709	Circular/Oval	Oval	Present	Present	Absent
42SV1927.B16:1	CCC	382878	4270718	Circular/Oval	Stick	Present	Present	Absent
42SV1927.B19:1	CCC	382871	4270722	Circular/Oval	Bucket	Absent	Present	Absent
42SV1927.B23:1	CCC	382864	4270730	Bucket	Bucket	Present	Present	Absent
42SV1927.B23:2	CCC	382864	4270730	Circular/Oval	Bucket.RB	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1927.B29:1	CCC	382859	4270762	Circular/Oval	Rectangular	Present	Present	Absent
42SV1927.B24:1	CCC	382868	4270730	Circular/Oval	Other	Present	Absent	Absent
42SV1927.B24:2	CCC	382868	4270730	Irregular	Stick	Absent	Present	Absent
42SV1927.B24:3	CCC	382868	4270730	Thumb	Other	Present	Absent	Absent
42SV1928.3a:1	CCC	382738	4270676	Thumb	Stick	Present	Present	Absent
42SV1928.4a:1	CCC	382730	4270676	Irregular	Rectangular	Present	Present	Absent
42SV1928.4b:1	CCC	382728	4270674	Bucket	Triangle	Present	Present	Absent
42SV1928.6:1	CCC	382715	4270673	Bucket	Stick	Present	Present	Absent
42SV1928.9:1	CCC	382709	4270662	Circular/Oval	Bucket	Present	Present	Absent
42SV1928.14:1	CCC	382689	4270656	Circular/Oval	Bucket.RB	Absent	Absent	Absent
42SV1928.16:1	CCC	382670	4270653	Inv.Thumb	Bucket.FB	Present	Absent	Absent
42SV1928.16:2	CCC	382670	4270653	Inv.Thumb	Bucket.FB	Present	Absent	Absent
42SV1928.17:1	CCC	382667	4270653	Stick	Bucket.RB	Present	Absent	Absent
42SV1928.17:2	CCC	382667	4270653	Stick	Bucket.RB	Present	Absent	Absent
42SV1928.19:1	CCC	382653	4270651	Other	Other	Present	Present	Absent
42SV1928.19:2	CCC	382653	4270651	Inv.Triangle	Other	Present	Present	Absent
42SV1928.19:3	CCC	382653	4270651	Inv.Triangle	Bucket.FB	Present	Present	Absent
42SV1928.21:1	CCC	382656	4270651	Irregular	Bucket.RB	Present	Present	Absent
42SV1928.25:1	CCC	382644	4270656	Bucket	Bucket	Absent	Absent	Absent
42SV1928.29:1	CCC	382637	4270665	Absent	Bucket.FB	Present	Present	Absent
42SV1928.31:1	CCC	382628	4270673	Inv.Triangle	Other	Present	Absent	Absent
42SV1928.31:2	CCC	382628	4270673	Bucket	Circular	Absent	Absent	Absent
42SV1928.32:1	CCC	382627	4270673	Bucket	Bucket.RB	Present	Absent	Absent
42SV1928.32:2	CCC	382627	4270673	Square/Rectangular	Bucket.RB	Absent	Present	Absent
42SV1928.33:1	CCC	382625	4270677	Circular/Oval	Rectangular	Present	Present	Absent
42SV1928.33:2	CCC	382625	4270677	Bucket	Bucket.FB	Present	Present	Absent
42SV1928.34b:1	CCC	382644	4270677	Stick	Rectangular	Present	Present	Absent
42SV1928.35:1	CCC	382674	4270679	Irregular	Bucket	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1928.35:2	CCC	382674	4270679	Square/Rectangular	Bucket	Present	Present	Absent
42SV1928.37:1	CCC	382690	4270681	Implied	Bucket.FB	Absent	Present	Absent
42SV1928.37:2	CCC	382690	4270681	Inv.Thumb	Oval	Present	Present	Absent
42SV1928.37:3	CCC	382690	4270681	Triangle	Rectangular	Present	Present	Absent
42SV1928.39:1	CCC	382714	4270681	Circular/Oval	Bucket.FB	Present	Present	Absent
42SV1928.41b:1	CCC	382737	4270691	Bucket	Bucket	Absent	Absent	Absent
42SV1928.43:1	CCC	382741	4270700	Square/Rectangular	Bucket.RB	Present	Present	Absent
42SV1928.45:1	CCC	382742	4270706	Implied	Circular	Present	Present	Absent
42SV1928.56:1	CCC	382780	4270731	Stick	Stick	Present	Present	Absent
42SV1928.56:2	CCC	382780	4270731	Stick	Stick	Present	Present	Absent
42SV1928.56:3	CCC	382780	4270731	Bucket	Bucket	Present	Absent	Absent
42SV1928.57:1	CCC	382786	4270729	Bucket	Bucket.RB	Present	Present	Absent
42SV1928.B8:1	CCC	382565	4270646	Inv.Bucket	Bucket	Absent	Present	Absent
42SV1928.B8:2	CCC	382565	4270646	Bucket	Bucket.FB	Present	Present	Female
42SV1928.B12a:1	CCC	382521	4270639	Bucket	Oval	Present	Absent	Absent
42SV1928.B12a:2	CCC	382521	4270639	Bucket	Bucket	Present	Present	Absent
42SV1928.B12a:3	CCC	382521	4270639	Square/Rectangular	Rectangular	Present	Present	Male
42SV1928.B16:1	CCC	382480	4270674	Irregular	Rectangular	Present	Present	Absent
42SV1928.B17:1	CCC	382510	4270673	Bucket	Bucket.RB	Present	Present	Absent
42SV1928.B22:1	CCC	382466	4270673	Circular/Oval	Stick	Present	Present	Absent
42SV1928.B26:1	CCC	382454	4270680	Square/Rectangular	Triangle	Absent	Absent	Absent
42SV1928.B29:1	CCC	382468	4270685	Bucket	Bucket.RB	Absent	Present	Male
42SV1928.B29:2	CCC	382468	4270685	Circular/Oval	Bucket.RB	Absent	Present	Absent
42SV1928.B31:1	CCC	382457	4270688	Bucket	Bucket.FB	Present	Present	Male
42SV1928.B31:2	CCC	382457	4270688	Other	Other	Present	Present	Absent
42SV1928.B32:1	CCC	382451	4270689	Circular/Oval	Triangle	Present	Present	Absent
42SV1928.B32:2	CCC	382451	4270689	Bucket	Bucket.RB	Absent	Present	Absent
42SV1928.B32:3	CCC	382451	4270689	Bucket	Bucket.FB	Absent	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1928.B32:4	CCC	382451	4270689	Inv.Bucket	Triangle	Absent	Absent	Absent
42SV1928.B33:1	CCC	382447	4270689	Thumb	Bucket.RB	Present	Present	Absent
42SV1928.B34c:1	CCC	382442	4270692	Circular/Oval	Bucket.RB	Absent	Present	Absent
42SV1928.B36:1	CCC	382435	4270694	Circular/Oval	Bucket	Present	Absent	Absent
42SV1928.B37a:1	CCC	382426	4270695	Square/Rectangular	Bucket.FB	Absent	Present	Absent
42SV1928.B37a:2	CCC	382426	4270695	Bucket	Bucket	Present	Present	Absent
42SV1928.B41:1	CCC	382558	4270680	Bucket	Triangle	Present	Present	Absent
42SV1928.B44:1	CCC	382522	4270677	Circular/Oval	Triangle	Absent	Absent	Absent
42SV1928.B46a:1	CCC	382512	4270689	Bucket	Bucket.FB	Present	Present	Absent
42SV1928.B46a:2	CCC	382512	4270689	Circular/Oval	Bucket.RB	Present	Present	Absent
42SV1928.B46a:3	CCC	382512	4270689	Bucket	Bucket.FB	Present	Present	Absent
42SV1928.B47:1	CCC	382502	4270685	Square/Rectangular	Triangle	Present	Present	Absent
42SV1928.B47:2	CCC	382502	4270685	Square/Rectangular	Bucket.RB	Present	Present	Absent
42SV1928.B50:1	CCC	382491	4270688	Circular/Oval	Circular	Present	Present	Absent
42SV1928.B50:2	CCC	382491	4270688	Thumb	Rectangular	Present	Present	Absent
42SV1928.B50:3	CCC	382491	4270688	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1928.B50:4	CCC	382491	4270688	Square/Rectangular	Stick	Present	Present	Male
42SV1928.B50:5	CCC	382491	4270688	Absent	Stick	Present	Present	Absent
42SV1928.B50:6	CCC	382491	4270688	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1928.B50:7	CCC	382491	4270688	Bucket	Triangle	Absent	Present	Male
42SV1928.B50:8	CCC	382491	4270688	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1928.B50:9	CCC	382491	4270688	Thumb	Triangle	Present	Present	Absent
42SV1928.B50:10	CCC	382491	4270688	Other	Stick	Present	Absent	Absent
42SV1928.B50:11	CCC	382491	4270688	Thumb	Bucket	Present	Present	Absent
42SV1928.B50:12	CCC	382491	4270688	Irregular	Stick	Present	Absent	Absent
42SV1928.B50:13	CCC	382491	4270688	Circular/Oval	Other	Present	Present	Absent
42SV1928.B51:1	CCC	382479	4270693	Bucket	Bucket	Present	Present	Absent
42SV1928.B52:1	CCC	382473	4270695	Thumb	Bucket.FB	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1928.B52:2	CCC	382473	4270695	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1928.B53:1	CCC	382471	4270695	Circular/Oval	Stick	Present	Present	Male
42SV1928.B55:1	CCC	382483	4270710	Thumb	Triangle	Absent	Absent	Absent
42SV1928.B55:2	CCC	382483	4270710	Thumb	Bucket.RB	Absent	Absent	Absent
42SV1928.B56:1	CCC	382467	4270695	Circular/Oval	Rectangular	Present	Present	Absent
42SV1928.B59:1	CCC	382456	4270697	Thumb	Triangle	Present	Present	Absent
42SV1928.B60:1	CCC	382452	4270701	Square/Rectangular	Rectangular	Present	Present	Absent
42SV1928.B69:1	CCC	382437	4270701	Stick	Stick	Present	Present	Absent
42SV1928.B69:2	CCC	382437	4270701	Irregular	Stick	Present	Present	Absent
42SV1928.B69:3	CCC	382437	4270701	Stick	Triangle	Present	Absent	Absent
42SV1928.B70:1	CCC	382432	4270702	Other	Other	Absent	Present	Male
42SV1928.B72:1	CCC	382415	4270709	Irregular	Other	Present	Present	Absent
42SV1928.B74a:1	CCC	382397	4270708	Circular/Oval	Bucket	Present	Present	Absent
42SV1928.B75:1	CCC	383393	4270712	Irregular	Other	Absent	Present	Absent
42SV1928.B80a:1	CCC	382365	4270708	Absent	Bucket	Present	Present	Absent
42SV1928.B80a:2	CCC	382365	4270708	Bucket	Bucket.RB	Present	Absent	Absent
42SV1928.B82:1	CCC	382359	4270710	Circular/Oval	Bucket.FB	Present	Present	Absent
42SV1928.B82:2	CCC	382359	4270710	Other	Bucket	Present	Present	Absent
42SV1928.B82:3	CCC	382359	4270710	Thumb	Rectangular	Present	Present	Absent
42SV1928.B84:1	CCC	382354	4270719	Thumb	Bucket.RB	Present	Absent	Absent
42SV1928.B85:1	CCC	382349	4270721	Absent	Bucket	Present	Present	Absent
42SV1928.B86:1	CCC	382348	4270722	Bucket	Triangle	Absent	Absent	Absent
42SV1928.B86:2	CCC	382348	4270722	Circular/Oval	Stick	Present	Present	Male
42SV1928.B90:1	CCC	382339	4270730	Other	Other	Absent	Present	Absent
42SV1928.B92:1	CCC	382323	4270725	Irregular	Rectangular	Present	Present	Absent
42SV1928.B94:1	CCC	382317	4270725	Bucket	Bucket	Present	Present	Female
42SV1928.B96:1	CCC	382305	4270728	Bucket	Bucket.RB	Present	Present	Absent
42SV1928.B102:1	CCC	382283	4270740	Circular/Oval	Bucket.FB	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1928.B102:2	CCC	382283	4270740	Thumb	Bucket.FB	Absent	Absent	Absent
42SV1928.B103:1	CCC	382272	4270746	Circular/Oval	Other	Absent	Present	Absent
42SV1928.B105:1	CCC	382235	4270764	Bucket	Bucket	Absent	Absent	Absent
42SV1929.2:1	CCC	381391	4271146	Bucket	Bucket	Present	Present	Absent
42SV1929.3:1	CCC	381372	4271140	Irregular	Triangle	Present	Present	Absent
42SV1929.B1:1	CCC	381177	4271148	Circular/Oval	Triangle	Absent	Present	Absent
42SV1929.B7:1	CCC	381181	4271144	Bucket	Bucket.RB	Absent	Present	Absent
42SV1929.B7:2	CCC	381181	4271144	Inv.Bucket	Rectangular	Present	Present	Male
42SV1929.B9:1	CCC	381169	4271137	Thumb	Bucket.RB	Absent	Present	Absent
42SV1929.B10:1	CCC	381164	4271145	Other	Rectangular	Present	Present	Absent
42SV1929.B11:1	CCC	381167	4271134	Irregular	Rectangular	Present	Present	Absent
42SV1929.B11:2	CCC	381167	4271134	Thumb	Bucket	Present	Absent	Absent
42SV1929.B12:1	CCC	381162	4271136	Circular/Oval	Stick	Present	Present	Absent
42SV1930.B2:1	CCC	382750	4270357	Bucket	Bucket	Present	Present	Male
42SV1930.B4:1	CCC	382731	4270375	Bucket	Bucket	Present	Present	Absent
42SV1930.B9:1	CCC	382689	4270352	Circular/Oval	Stick	Absent	Present	Absent
42SV1930.B9:2	CCC	382689	4270352	Circular/Oval	Stick	Present	Present	Male
42SV1930.B9:3	CCC	382689	4270352	Circular/Oval	Stick	Present	Present	Male
42SV1930.B10:1	CCC	382686	4270347	Circular/Oval	Bucket.FB	Absent	Present	Absent
42SV1931.3:1	CCC	382385	4270354	Circular/Oval	Bucket.RB	Present	Present	Absent
42SV1933.2:1	CCC	381926	4269551	Bucket	Rectangular	Present	Absent	Absent
42SV1933.4:1	CCC	381915	4269544	Bucket	Bucket	Absent	Present	Absent
42SV1933.4:2	CCC	381915	4269544	Other	Bucket.RB	Absent	Present	Absent
42SV1933.4:3	CCC	381915	4269544	Irregular	Rectangular	Present	Present	Absent
42SV1933.4:4	CCC	381915	4269544	Circular/Oval	Bucket	Present	Absent	Absent
42SV1933.7:1	CCC	381895	4269516	Irregular	Bucket	Present	Absent	Absent
42SV1933.7:2	CCC	381895	4269516	Stick	Bucket.RB	Present	Present	Absent
42SV1933.7:3	CCC	381895	4269516	Circular/Oval	Stick	Present	Absent	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1933.8:1	CCC	381834	4269468	Irregular	Other	Present	Present	Absent
42SV1933.11:1	CCC	381849	4269526	Bucket	Bucket.RB	Absent	Present	Absent
42SV1933.11:2	CCC	381849	4269526	Circular/Oval	Bucket.RB	Present	Present	Absent
42SV1933.11:3	CCC	381849	4269526	Irregular	Rectangular	Present	Absent	Absent
42SV1933.11:4	CCC	381849	4269526	Irregular	Rectangular	Present	Present	Absent
42SV1933.11:5	CCC	381849	4269526	Circular/Oval	Other	Absent	Absent	Absent
42SV1933.11:6	CCC	381849	4269526	Circular/Oval	Stick	Present	Present	Absent
42SV1933.11:7	CCC	381849	4269526	Thumb	Rectangular	Present	Present	Absent
42SV1933.15:1	CCC	381830	4269520	Absent	Bucket	Present	Present	Absent
42SV1933.15:2	CCC	381830	4269520	Inv.Triangle	Rectangular	Present	Present	Absent
42SV1933.15:3	CCC	381830	4269520	Square/Rectangular	Bucket	Present	Present	Absent
42SV1933.16:1	CCC	381827	4269509	Square/Rectangular	Bucket.FB	Present	Present	Absent
42SV1933.17:1	CCC	381787	4269484	Absent	Bucket	Absent	Absent	Absent
42SV1933.17:2	CCC	381787	4269484	Circular/Oval	Rectangular	Present	Present	Absent
42SV1933.17:3	CCC	381787	4269484	Stick	Bucket.RB	Present	Present	Absent
42SV1933.18:1	CCC	381785	4269478	Bucket	Rectangular	Present	Absent	Absent
42SV1933.18:2	CCC	381785	4269478	Bucket	Bucket.FB	Absent	Absent	Absent
42SV1933.18:3	CCC	381785	4269478	Bucket	Other	Present	Present	Absent
42SV1933.22:1	CCC	381743	4269403	Triangle	Stick	Present	Present	Absent
42SV1933.23:1	CCC	381714	4269381	Circular/Oval	Other	Present	Absent	Absent
42SV1934.1:1	CCC	381930	4270760	Inv.Bucket	Bucket.FB	Present	Absent	Absent
42SV1934.1:2	CCC	381930	4270760	Circular/Oval	Stick	Present	Present	Absent
42SV1934.1:3	CCC	381930	4270760	Square/Rectangular	Bucket.RB	Present	Present	Absent
42SV1934.1:4	CCC	381930	4270760	Thumb	Bucket.RB	Present	Absent	Absent
42SV1934.1:5	CCC	381930	4270760	Absent	Triangle	Present	Absent	Absent
42SV1934.1:6	CCC	381930	4270760	Absent	Other	Absent	Absent	Absent
42SV1934.1:7	CCC	381930	4270760	Stick	Triangle	Present	Absent	Absent
42SV1934.1:8	CCC	381930	4270760	Absent	Bucket.FB	Absent	Absent	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42SV1936.1:1	CCC	381992	4268826	Bucket	Bucket.FB	Present	Absent	Absent
42SV1936.1:2	CCC	381992	4268826	Bucket	Triangle	Present	Absent	Absent
42SV1936.1:3	CCC	381992	4268826	Bucket	Other	Present	Absent	Absent
42SV1936.1:4	CCC	381992	4268826	Inv.Thumb	Bucket	Absent	Present	Absent
42SV1936.2:1	CCC	381987	4268831	Thumb	Bucket	Present	Absent	Absent
42SV1937.1:1	CCC	383664	4268708	Inv.Thumb	Oval	Present	Absent	Absent
42SV1937.1:2	CCC	383664	4268708	Bucket	Bucket	Present	Absent	Absent
42SV1937.1:3	CCC	383664	4268708	Bucket	Bucket	Present	Present	Absent
42SV1937.2:1	CCC	383661	4268700	Square/Rectangular	Bucket	Absent	Present	Absent
42SV1932.4:1	CCC	382242	4269958	Bucket	Bucket	Present	Present	Male
42SV1932.4:2	CCC	382242	4269958	Bucket	Bucket	Present	Present	Absent
42SV1932.4:3	CCC	382242	4269958	Other	Bucket.RB	Present	Absent	Absent
42SV1932.6:1	CCC	382232	4269948	Other	Rectangular	Absent	Absent	Absent
42GA1437.1B:1	GSENM	[19]		Absent	Bucket	Present	Absent	Absent
42GA1437.1B:2	GSENM			Absent	Bucket	Present	Absent	Absent
42GA1437.1B:3	GSENM			Bucket	Bucket	Absent	Absent	Absent
42GA1437.1D:1	GSENM			Absent	Bucket	Present	Absent	Absent
42GA1437.1D:2	GSENM			Absent	Bucket	Present	Absent	Absent
42GA1437.1D:3	GSENM			Square/Rectangular	Bucket	Present	Absent	Absent
42GA1437.1D:4	GSENM			Square/Rectangular	Bucket.RB	Present	Absent	Absent
42GA1437.1D:5	GSENM			Absent	Absent	Absent	Absent	Absent
42GA1437.1D:6	GSENM			Circular/Oval	Bucket	Absent	Absent	Absent
42GA1437.2:1	GSENM			Absent	Bucket	Absent	Present	Absent
42GA1437.2:2	GSENM			Inv.Triangle	Bucket	Present	Present	Absent
42GA1437.2:3	GSENM			Other	Bucket	Present	Absent	Absent

[19] UTMs at GSENM have been omitted at the request of the BLM.

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42GA1437.3:1	GSENM			Bucket	Bucket	Present	Absent	Absent
42GA1438.1:1	GSENM			Circular/Oval	Bucket	Present	Present	Absent
42GA1440.1:1	GSENM			Square/Rectangular	Bucket	Present	Present	Absent
42GA1440.1:2	GSENM			Thumb	Bucket.FB	Present	Absent	Absent
42GA1440.1:3	GSENM			Circular/Oval	Bucket.RB	Present	Absent	Absent
42GA1440.2:1	GSENM			Circular/Oval	Bucket.FB	Present	Absent	Absent
42GA1440.3:1	GSENM			Bucket	Bucket.RB	Absent	Present	Absent
42GA1440.3:2	GSENM			Thumb	Stick	Present	Present	Absent
42GA1440.3:3	GSENM			Absent	Oval	Absent	Present	Absent
42GA1440.3:4	GSENM			Thumb	Rectangular	Present	Present	Absent
42GA1440.4:1	GSENM			Circular/Oval	Oval	Absent	Present	Absent
42GA1440.4:2	GSENM			Thumb	Bucket.FB	Absent	Absent	Absent
42GA1441.1:1	GSENM			Circular/Oval	Stick	Present	Present	Absent
42GA1441.1:2	GSENM			Circular/Oval	Other	Absent	Present	Absent
42GA1441.1:3	GSENM			Square/Rectangular	Stick	Present	Present	Absent
42GA1440.2A:1	GSENM			Irregular	Rectangular	Present	Present	Absent
42GA1440.2A:2	GSENM			Thumb	Bucket	Present	Absent	Absent
42GA1440.2B:3	GSENM			Circular/Oval	Other	Present	Present	Absent
42GA1440.2B:4	GSENM			Thumb	Triangle	Absent	Absent	Absent
42GA1440.2B:5	GSENM			Square/Rectangular	Stick	Present	Present	Absent
42GA1440.2B:6	GSENM			Circular/Oval	Bucket.FB	Present	Absent	Female
42GA1440.2B:7	GSENM			Bucket	Other	Absent	Absent	Absent
42GA1440.2C:8	GSENM			Thumb	Other	Present	Present	Absent
42GA1440.2C:9	GSENM			Circular/Oval	Bucket	Present	Present	Absent
42GA1440.2A:10	GSENM			Thumb	Bucket.FB	Absent	Present	Absent
42GA1440.2A:11	GSENM			Circular/Oval	Triangle	Absent	Absent	Absent
42GA1440.2A:12	GSENM			Thumb	Bucket.FB	Present	Absent	Absent
42GA1440.2A:13	GSENM			Irregular	Bucket.FB	Absent	Absent	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42GA5811.2:1	GSENM			Square/Rectangular	Bucket.FB	Absent	Absent	Absent
42GA5811.3:1	GSENM			Square/Rectangular	Bucket.RB	Present	Absent	Absent
42GA5811.3:2	GSENM			Square/Rectangular	Bucket.FB	Present	Absent	Absent
42GA5811.4:1	GSENM			Irregular	Bucket.FB	Absent	Absent	Absent
42GA5817.1:1	GSENM			Irregular	Triangle	Present	Absent	Absent
42GA5817.1:2	GSENM			Thumb	Other	Present	Present	Absent
42GA5826.2:1	GSENM			Thumb	Stick	Present	Absent	Absent
42GA5826.5:1	GSENM			Circular/Oval	Bucket.RB	Present	Present	Absent
42GA5826.5:2	GSENM			Circular/Oval	Bucket.FB	Present	Present	Absent
42GA5826.5:3	GSENM			Circular/Oval	Bucket.RB	Present	Present	Absent
42GA5826.1:1	GSENM			Irregular	Rectangular	Present	Present	Absent
42GA5833.3:1	GSENM			Thumb	Triangle	Absent	Absent	Absent
42GA5833.3:2	GSENM			Bucket	Triangle	Absent	Absent	Absent
42GA5833.3:3	GSENM			Circular/Oval	Bucket	Absent	Absent	Absent
42GA5833.3:4	GSENM			Circular/Oval	Bucket.FB	Absent	Present	Absent
42GA5833.3:5	GSENM			Circular/Oval	Bucket.RB	Absent	Absent	Absent
42GA5833.3:6	GSENM			Circular/Oval	Bucket	Present	Present	Absent
42GA5833.3:7	GSENM			Inv.Triangle	Bucket	Absent	Present	Absent
42GA5833.4:1	GSENM			Bucket	Bucket.RB	Absent	Absent	Absent
42GA5833.4:2	GSENM			Circular/Oval	Other	Present	Present	Absent
42GA5833.4:3	GSENM			Irregular	Bucket	Absent	Absent	Absent
42GA5833.4:4	GSENM			Thumb	Bucket.RB	Present	Absent	Absent
42GA5833.4:5	GSENM			Circular/Oval	Bucket	Absent	Absent	Absent
42GA5833.4:6	GSENM			Thumb	Bucket.RB	Absent	Absent	Absent
42GA5833.4:7	GSENM			Circular/Oval	Other	Absent	Absent	Absent
42GA5855.1:1	GSENM			Inv.Triangle	Triangle	Absent	Absent	Absent
42GA5855.1:2	GSENM			Bucket	Bucket.FB	Present	Absent	Absent
42GA5855.1:3	GSENM			Circular/Oval	Bucket.FB	Present	Present	Absent

Anthropomorph	Region	E	N	Head	Body	Arms	Legs	Genitalia
42GA5855.1:4	GSENM			Circular/Oval	Bucket.FB	Present	Present	Absent
42GA5855.1:5	GSENM			Thumb	Bucket.FB	Absent	Absent	Absent
42GA5855.1:6	GSENM			Circular/Oval	Bucket	Absent	Absent	Absent
42GA5855.1:7	GSENM			Thumb	Bucket.FB	Present	Absent	Absent
42GA5855.1:8	GSENM			Triangle	Bucket.FB	Present	Absent	Absent
SB IF 15.1:1	GSENM			Circular/Oval	Circular	Present	Present	Absent
42GA5814.1:1	GSENM			Circular/Oval	Bucket.RB	Present	Absent	Absent
42GA5814.1:2	GSENM			Thumb	Bucket.FB	Present	Absent	Absent
42GA5814.1:3	GSENM			Thumb	Bucket.FB	Present	Absent	Absent

Appendix D: Spatial Plots of Head and Body Forms

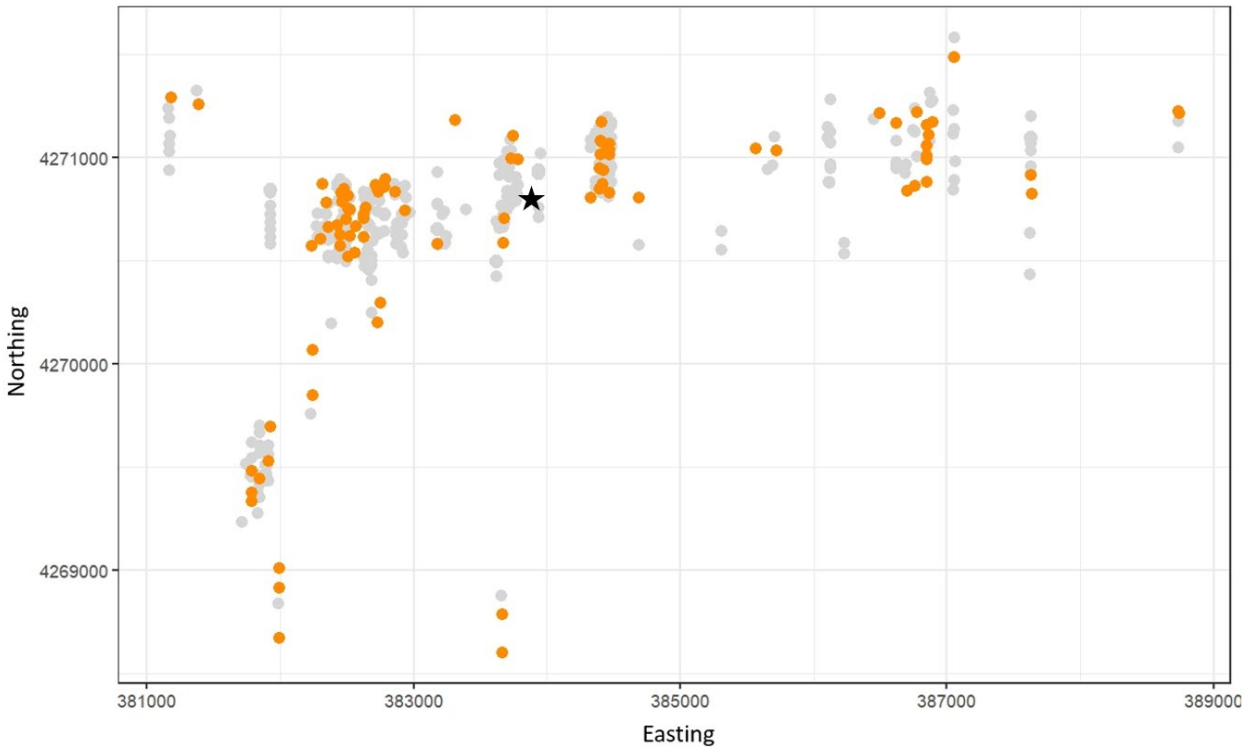


Figure D.1. Bucket heads at CCC.

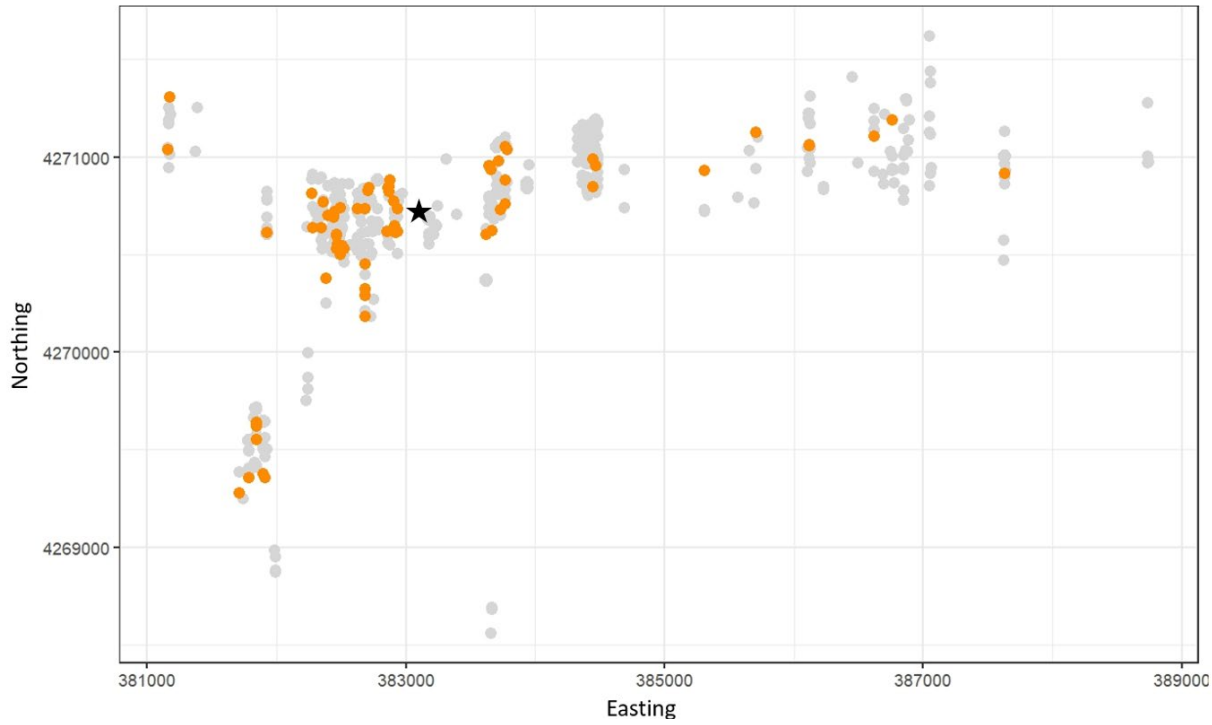


Figure D.2. Circular/Oval heads at CCC.

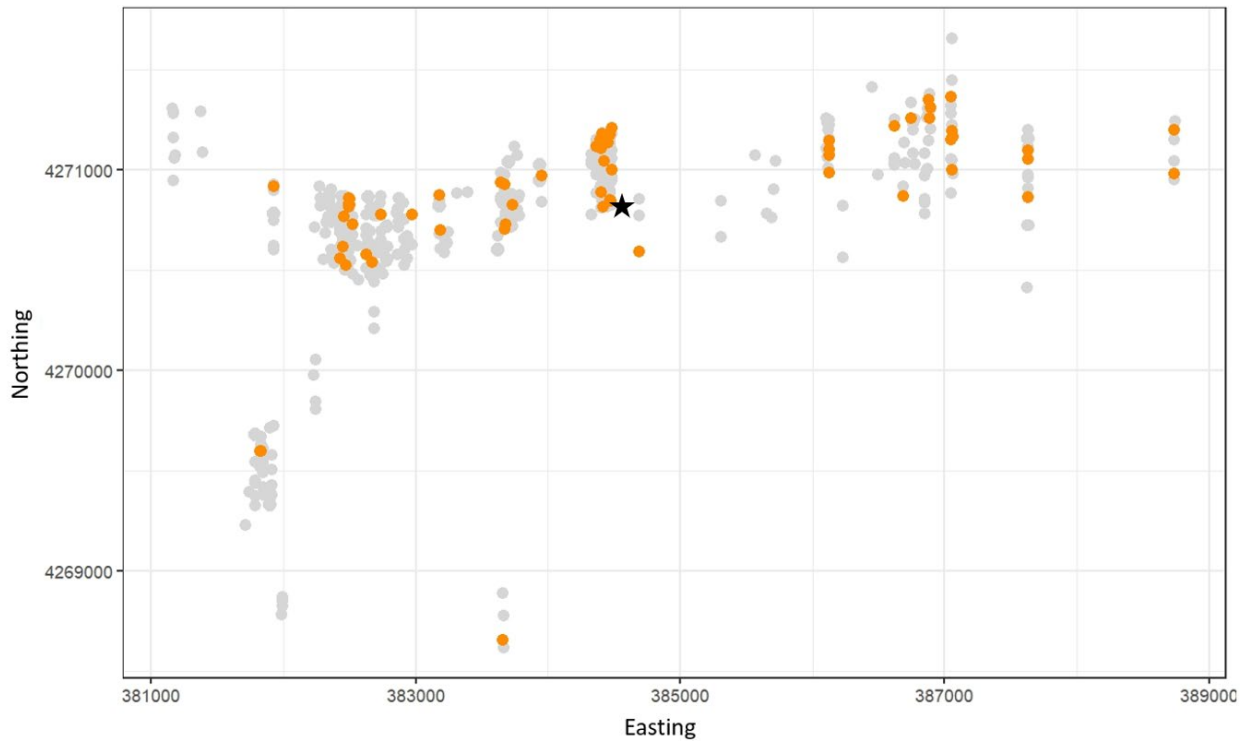


Figure D.3. Square/Rectangle heads at CCC.

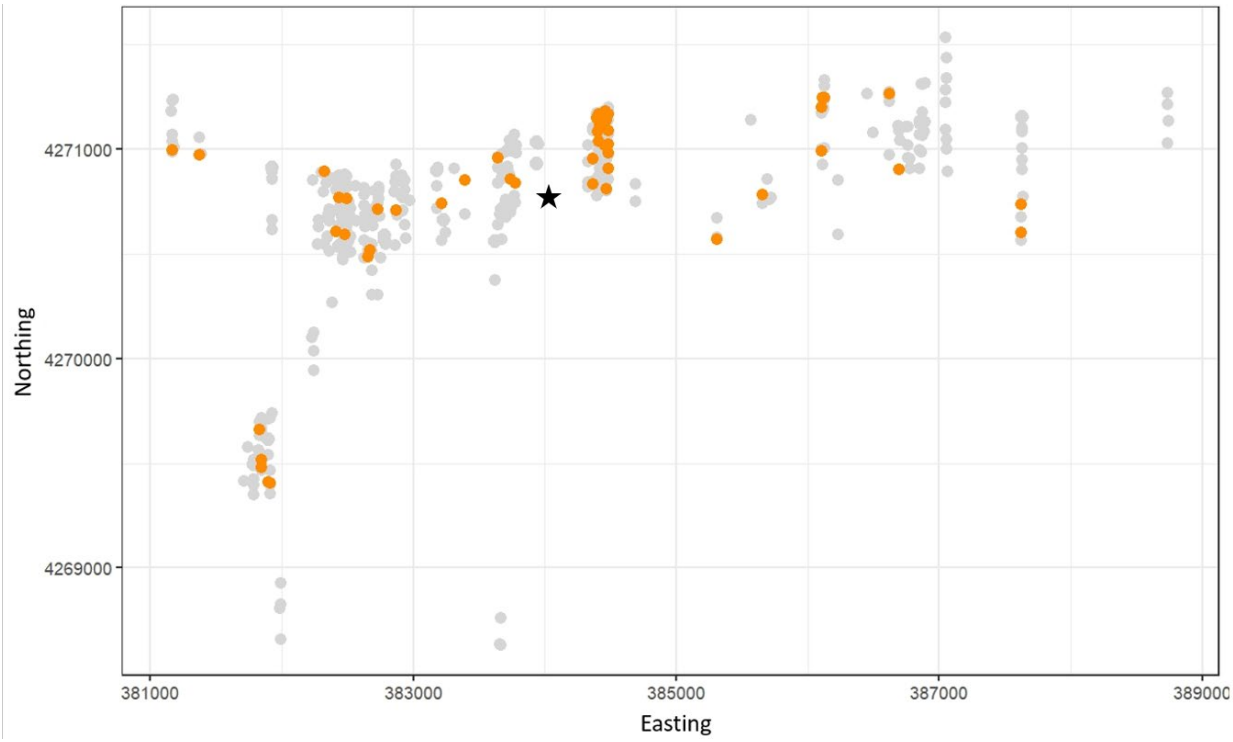


Figure D.4. Irregular heads at CCC.

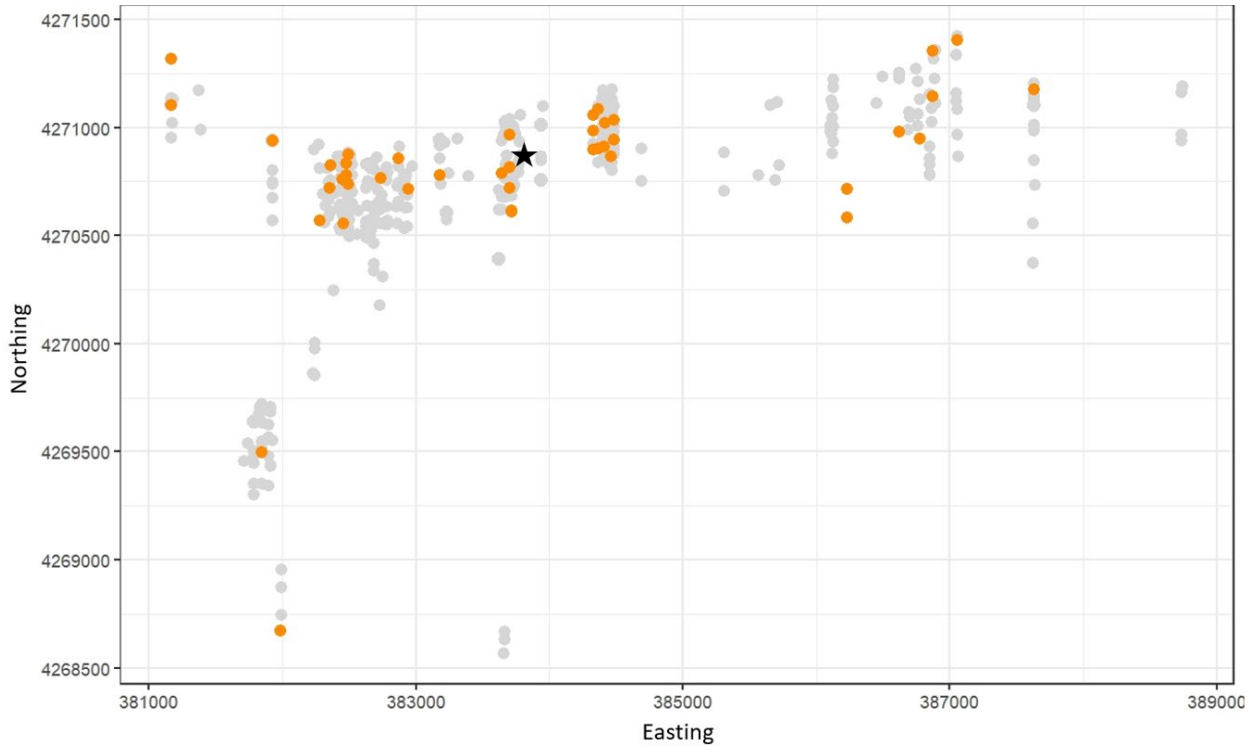


Figure D.5. Thumb heads at CCC.

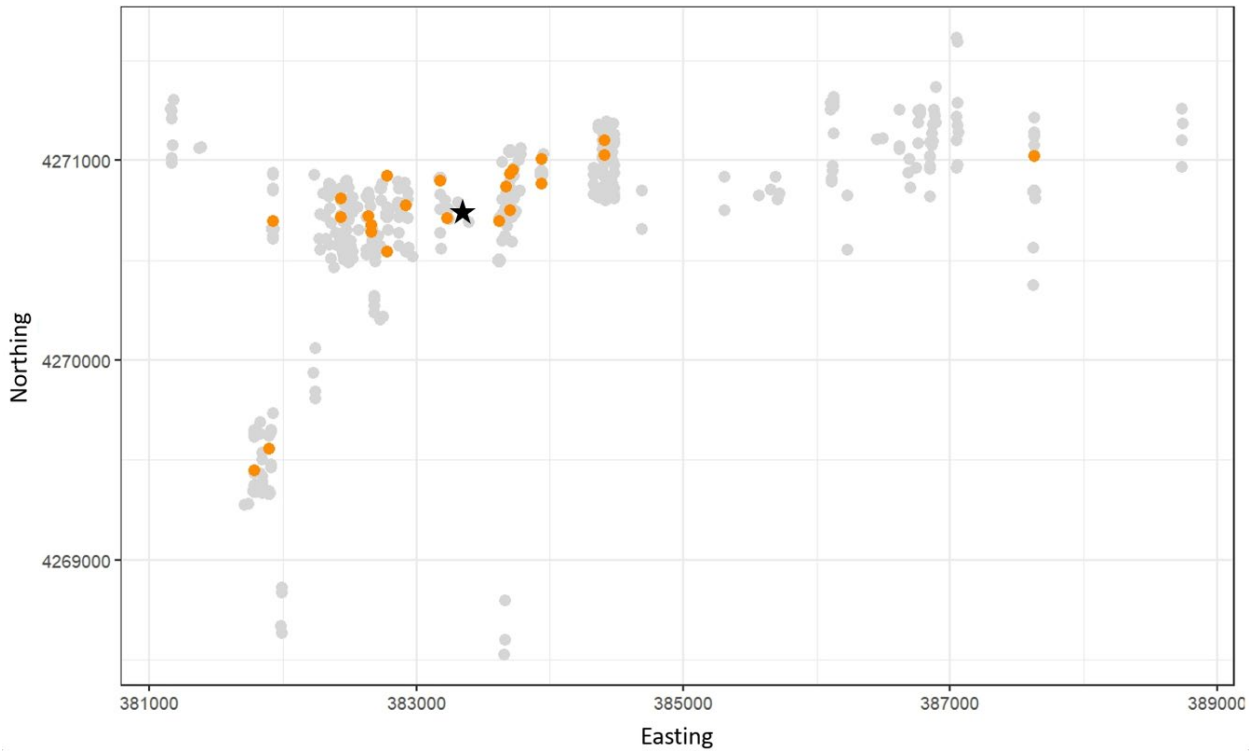


Figure D.6. Stick heads at Clear CCC.

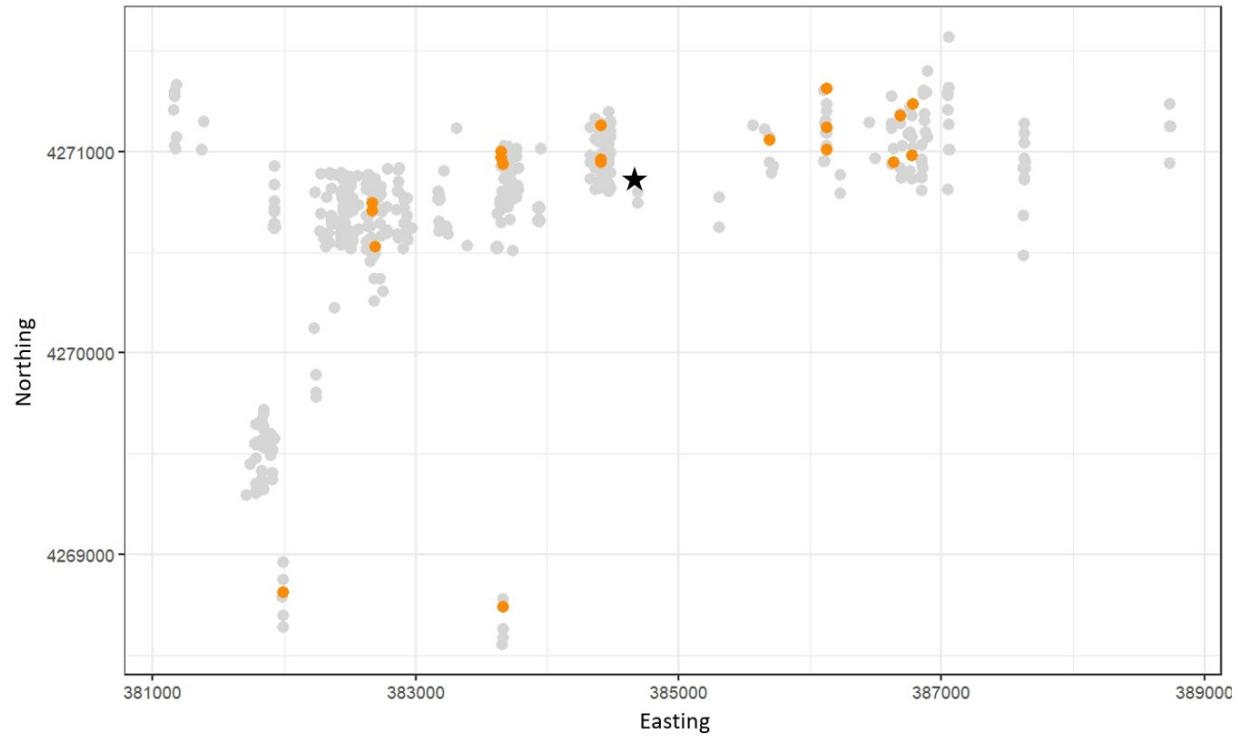


Figure D.7. Inverted thumb heads at CCC.

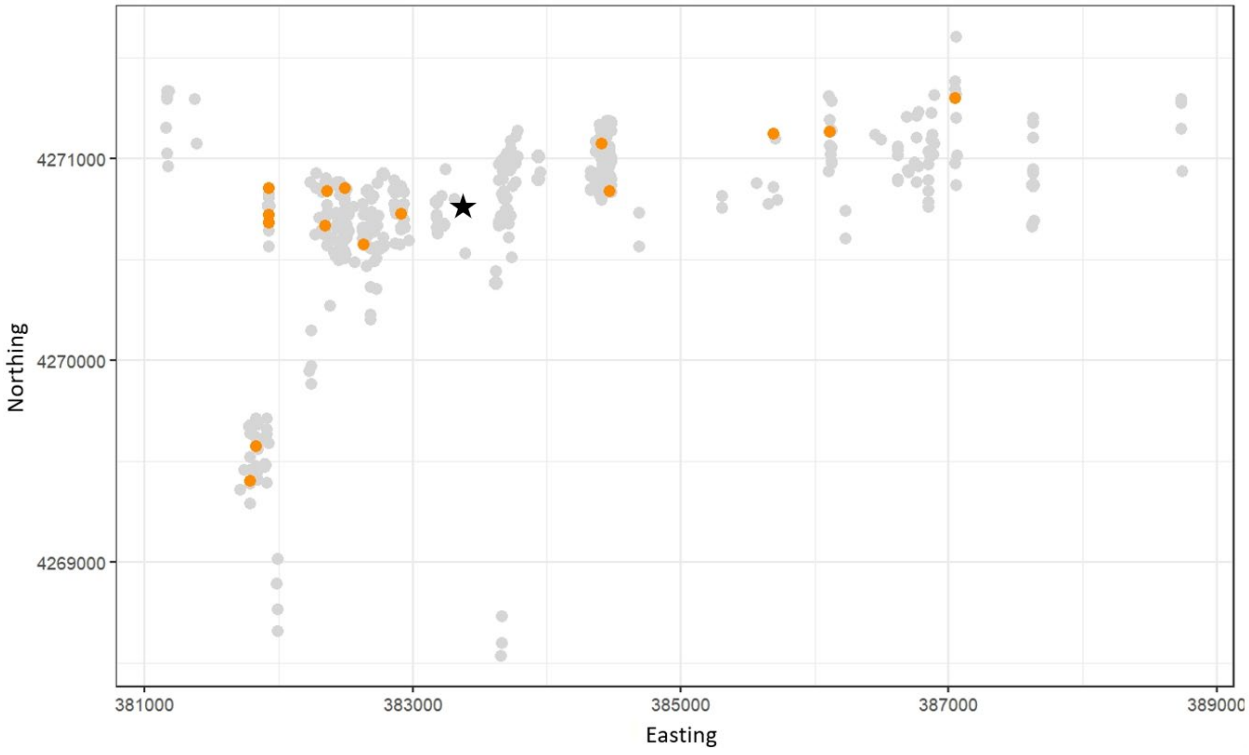


Figure D.8. Absent heads at CCC.

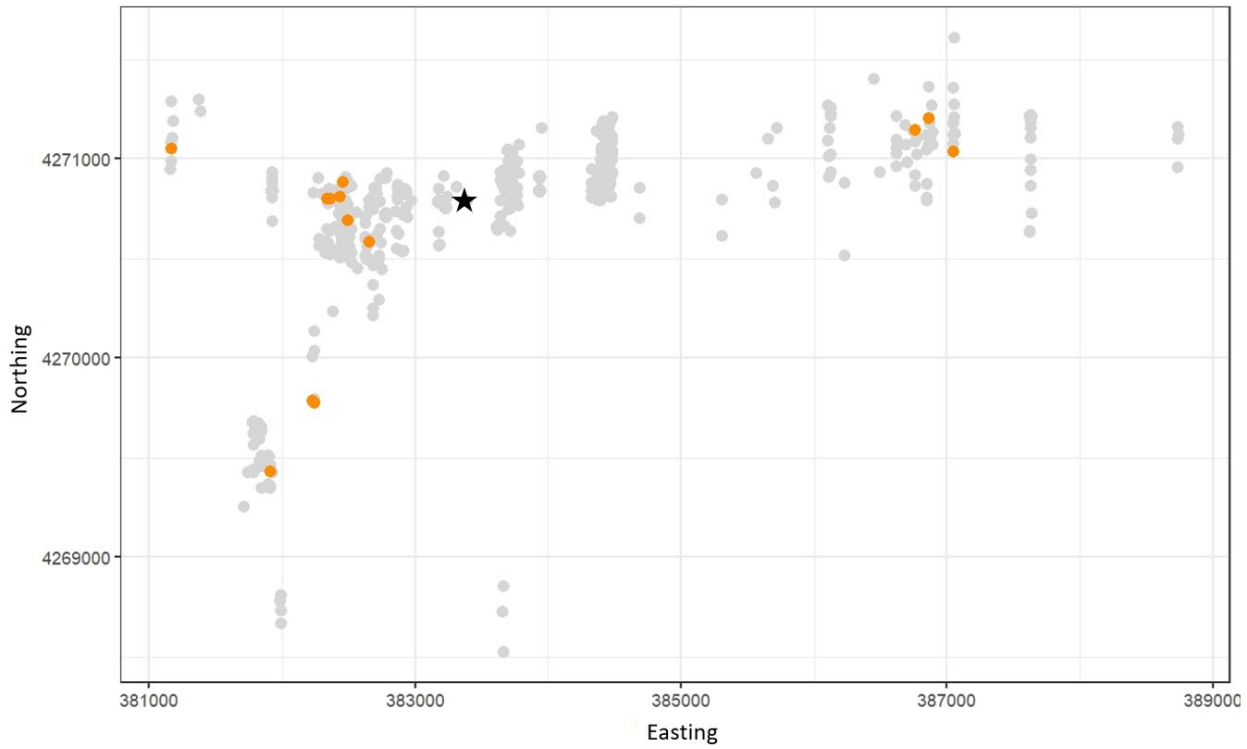


Figure D.9. “Other” heads at CCC.

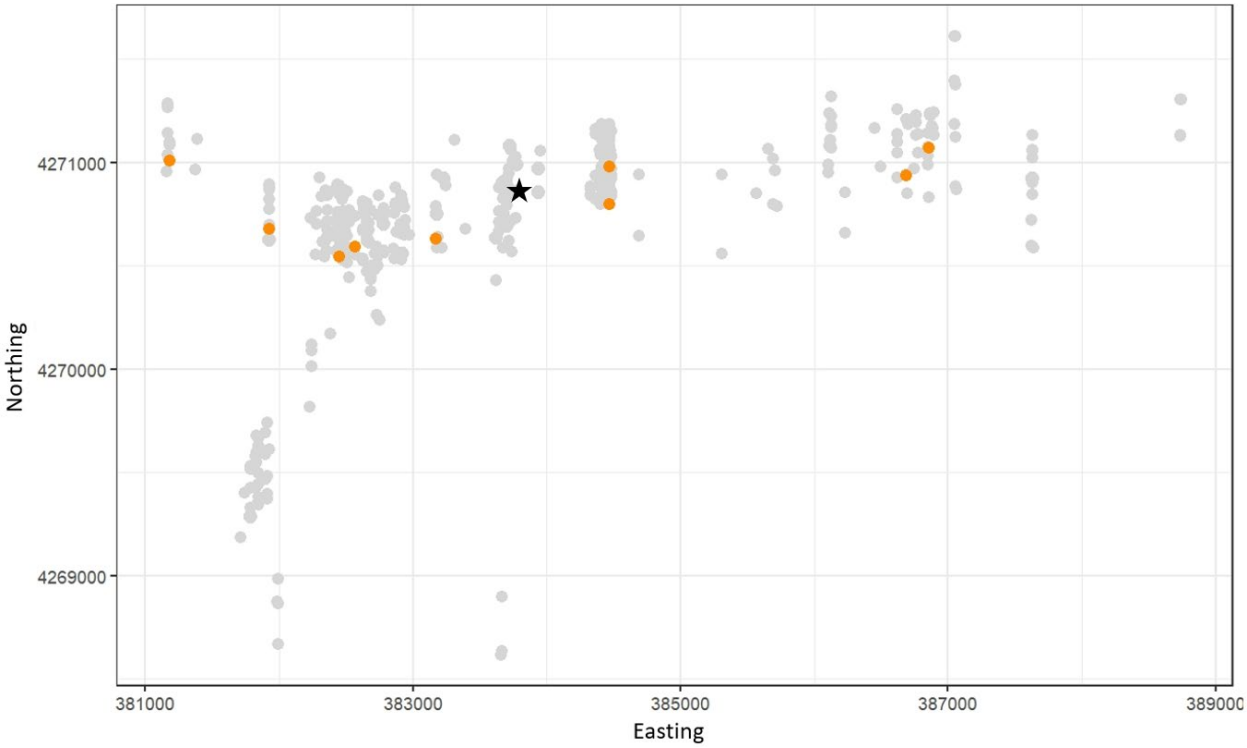


Figure D.10. Inverted Bucket heads at CCC.

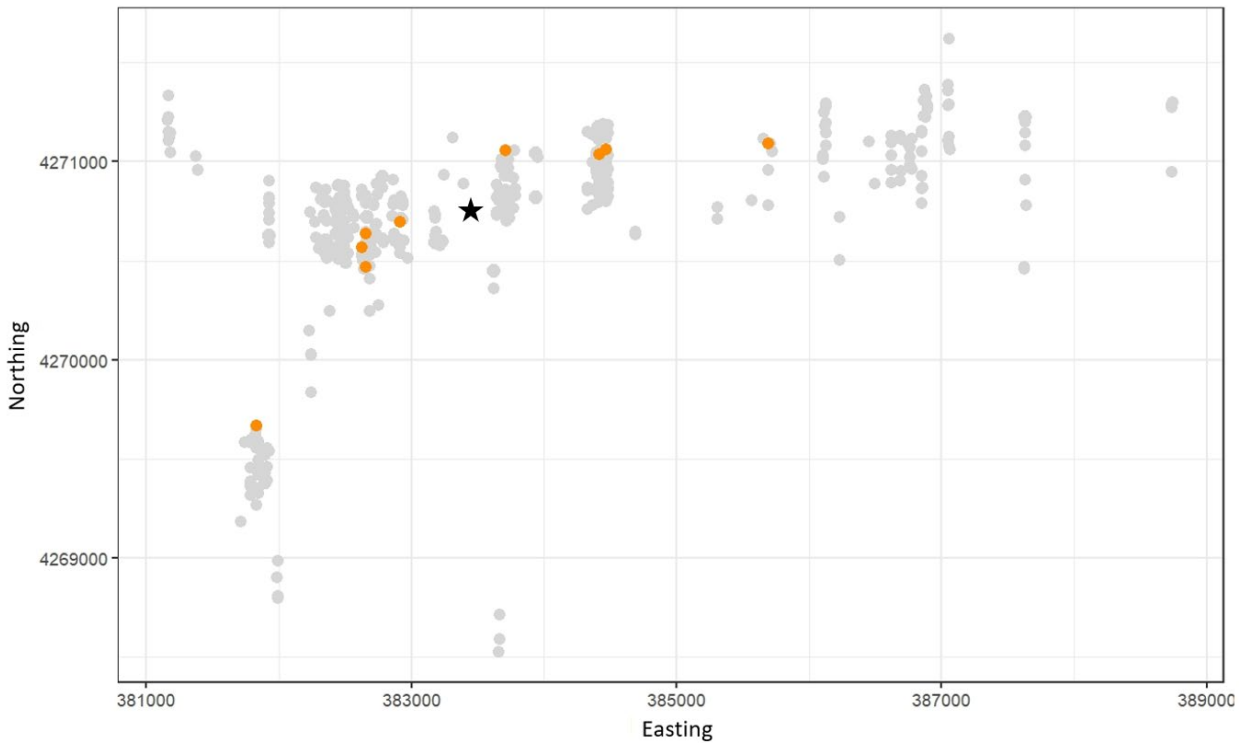


Figure D.11. Inverted Triangle heads at CCC.

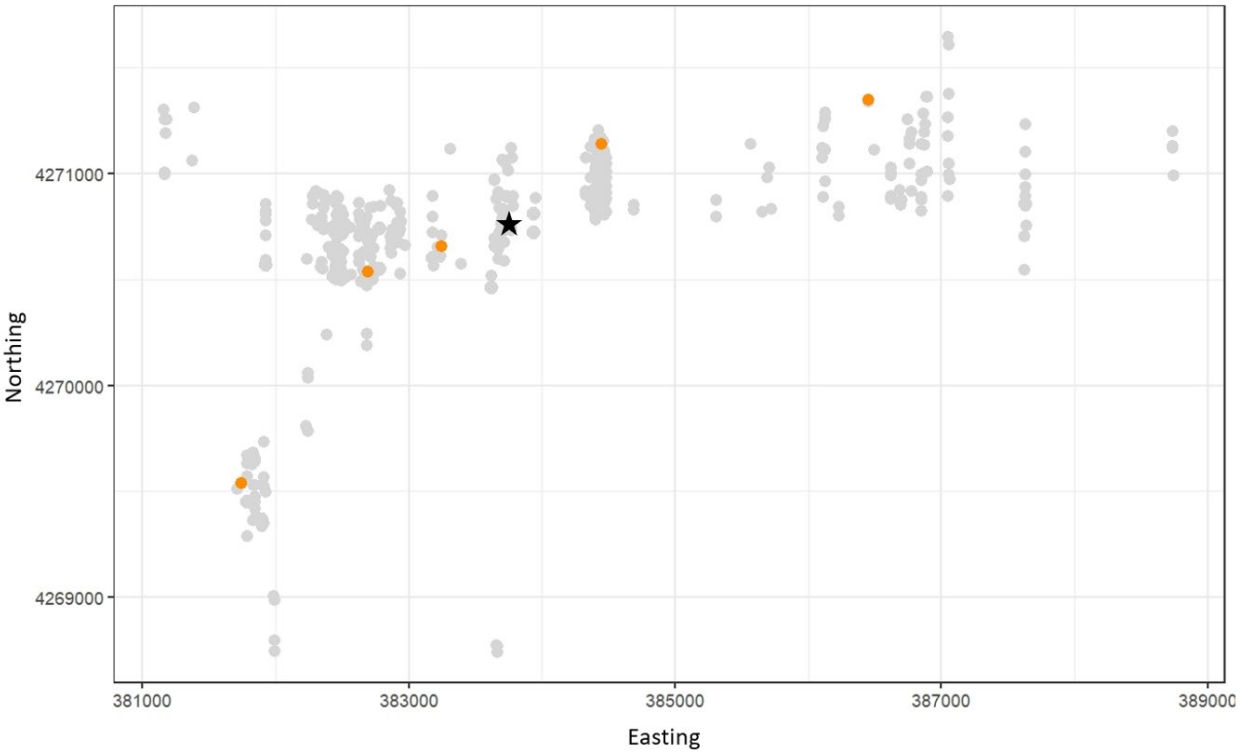


Figure D.11. Triangle heads at CCC.

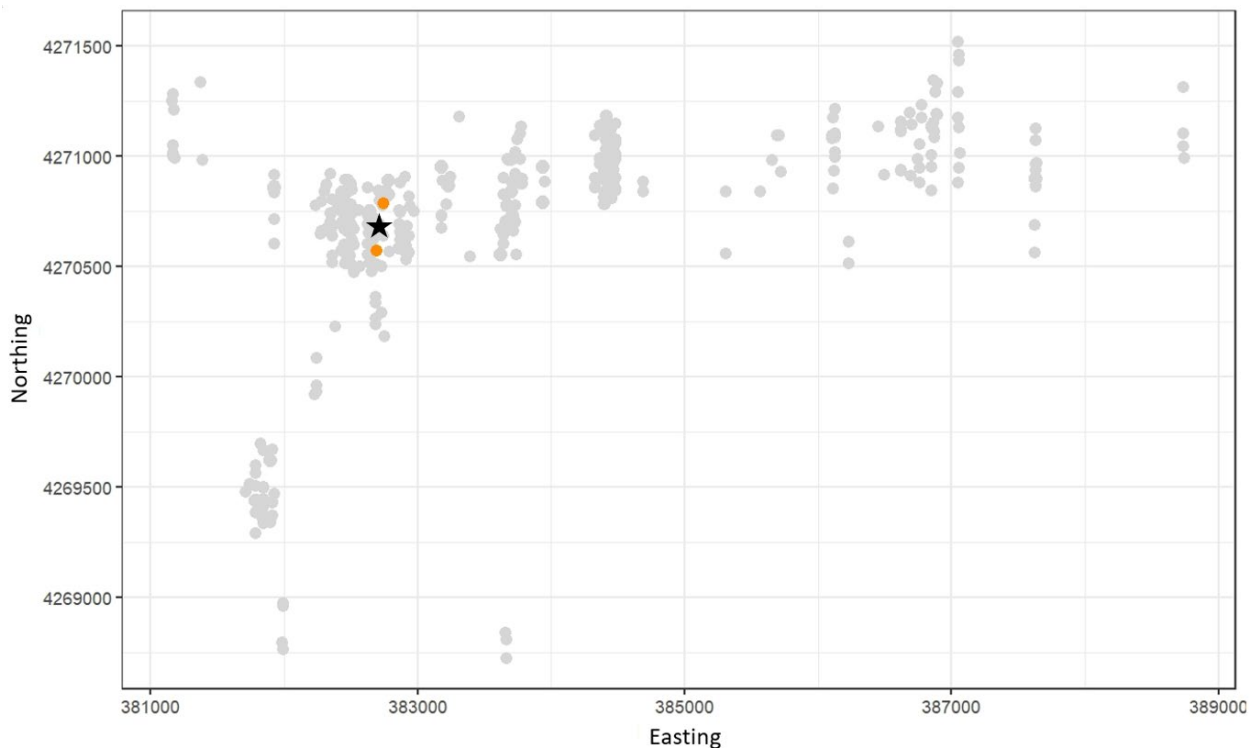


Figure D.12. Implied heads at CCC.

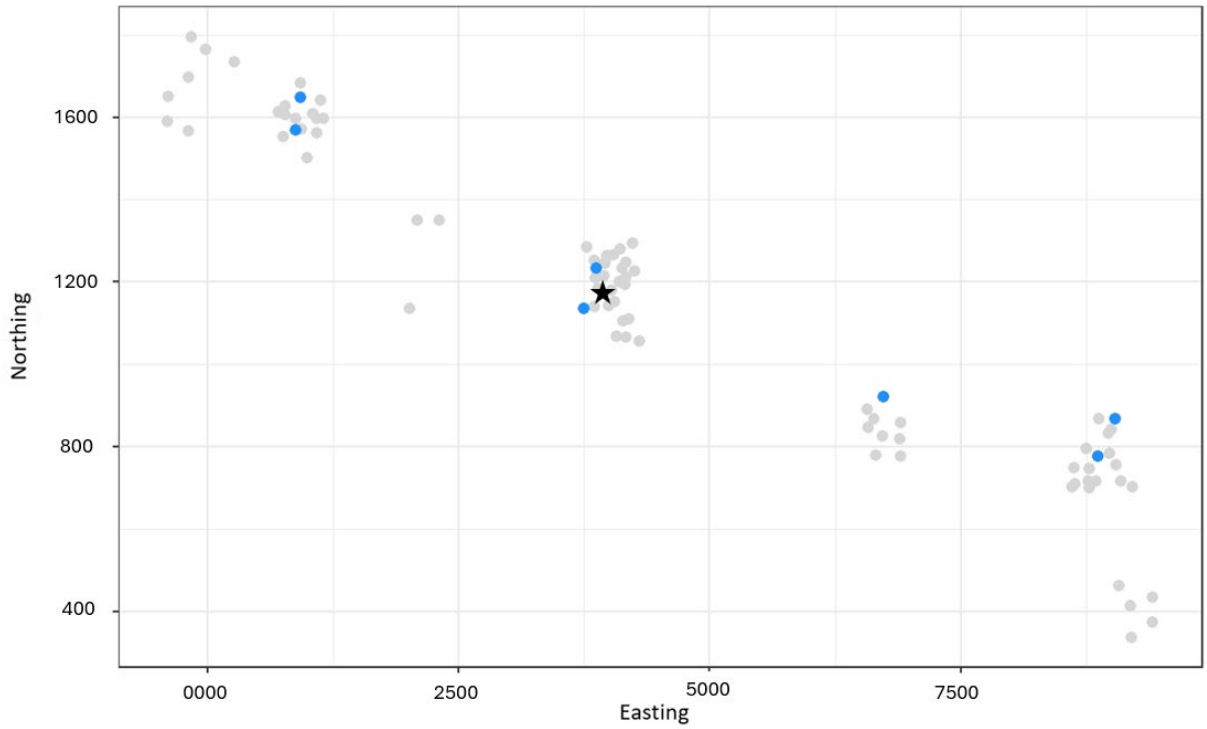


Figure D.13. Bucket heads at GSENM.

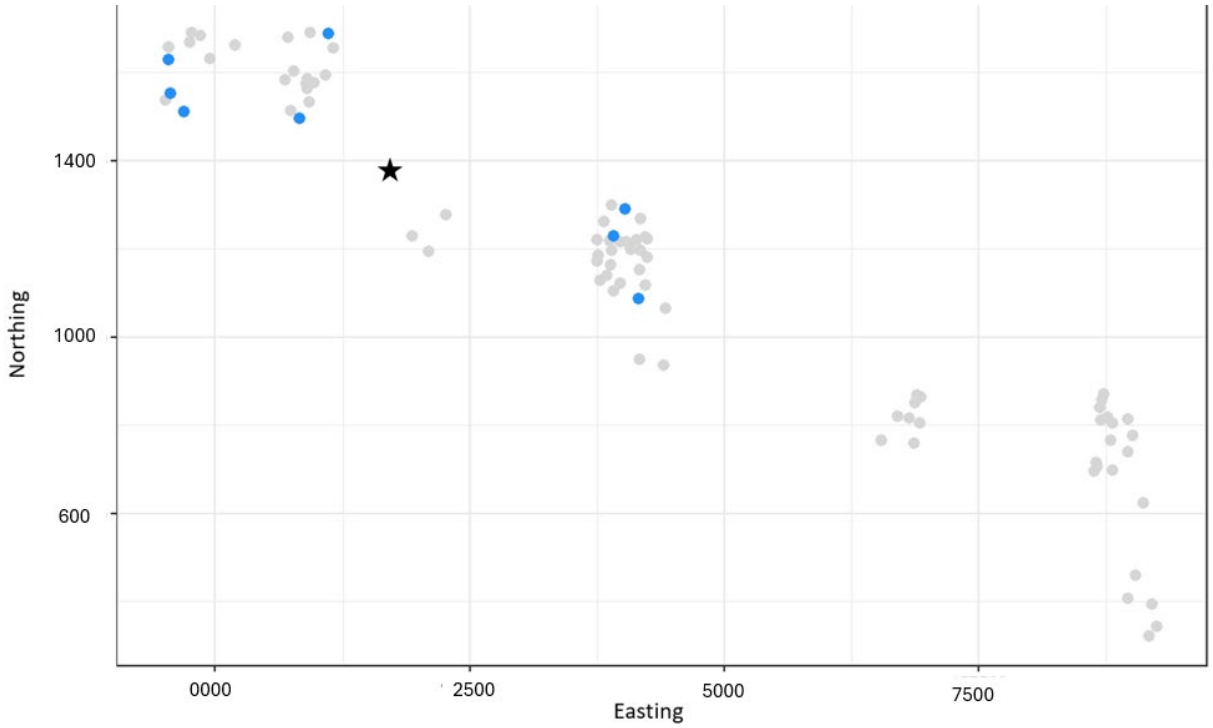


Figure D.14. Square/Rectangular heads at GSENM.

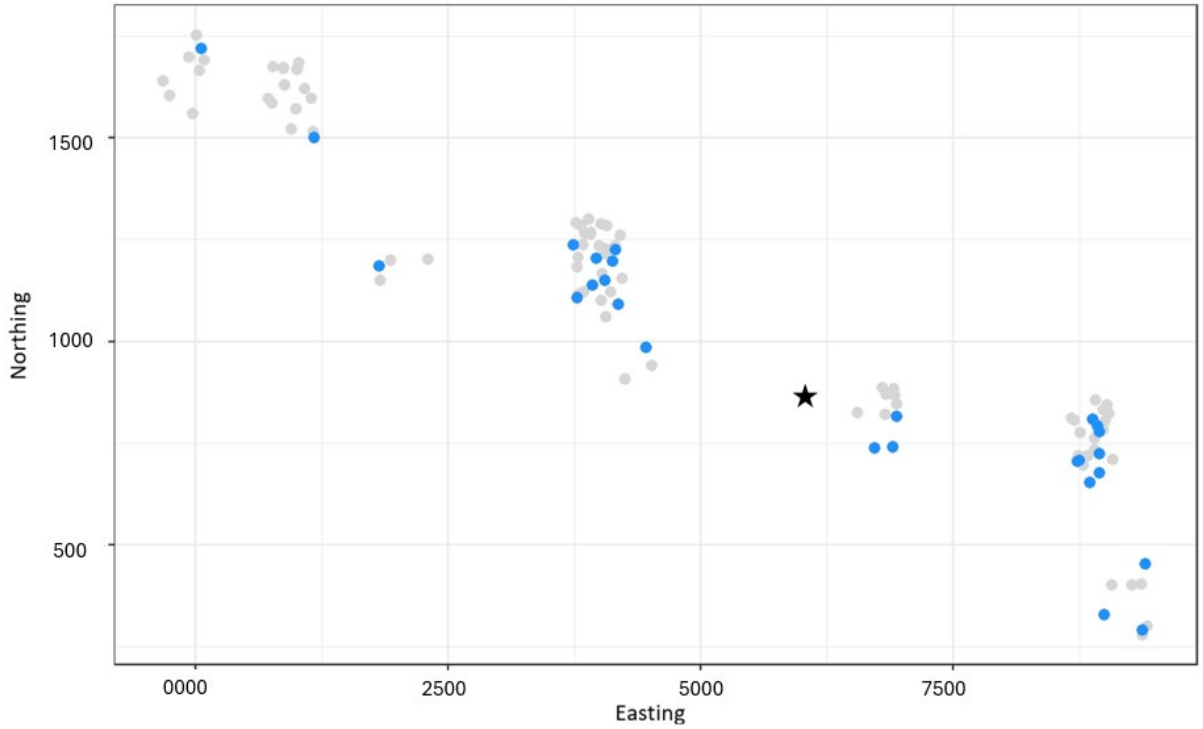


Figure D.15. Circular/Oval heads at GSENM.

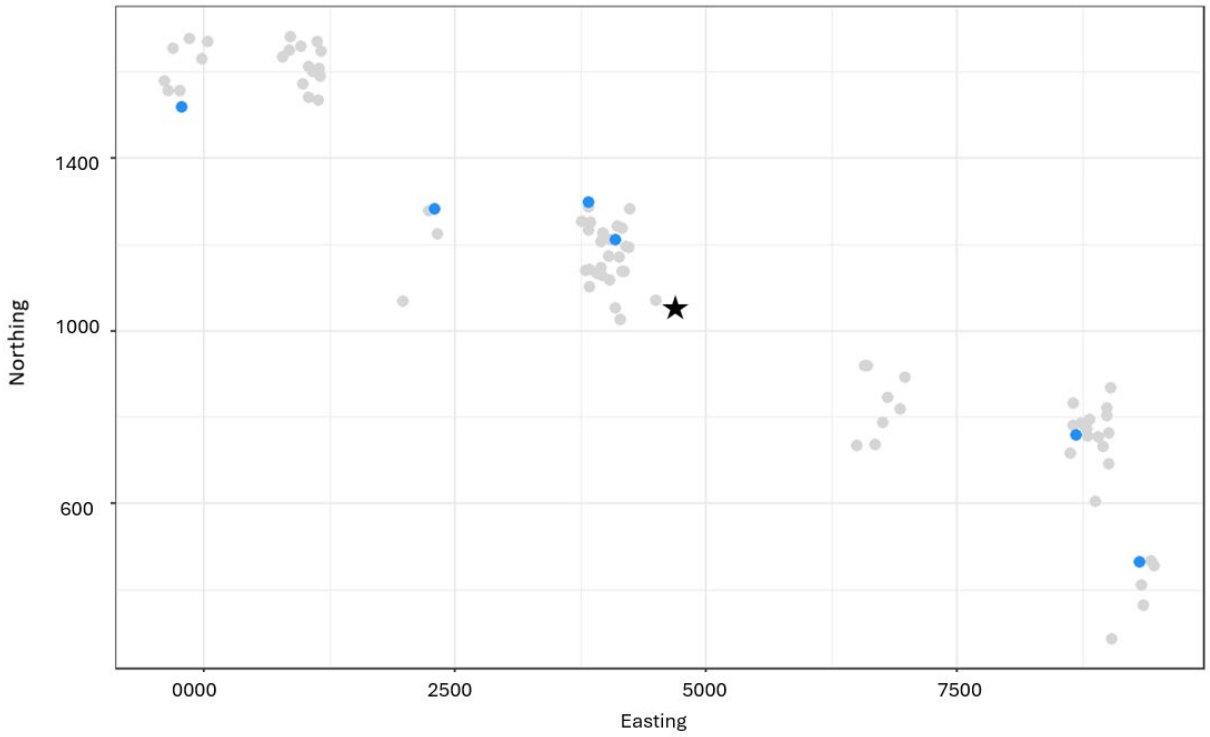


Figure D.16. Irregular heads at GSENM.

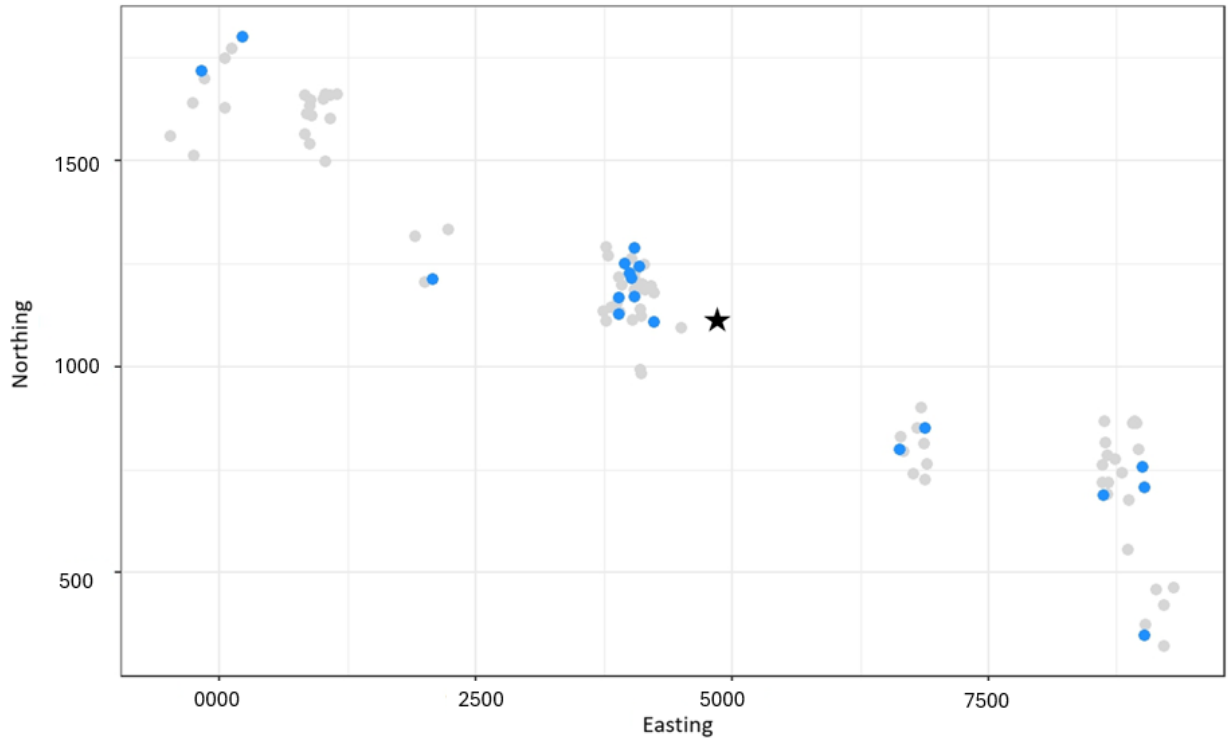


Figure D.17. Thumb Heads at GSENM.

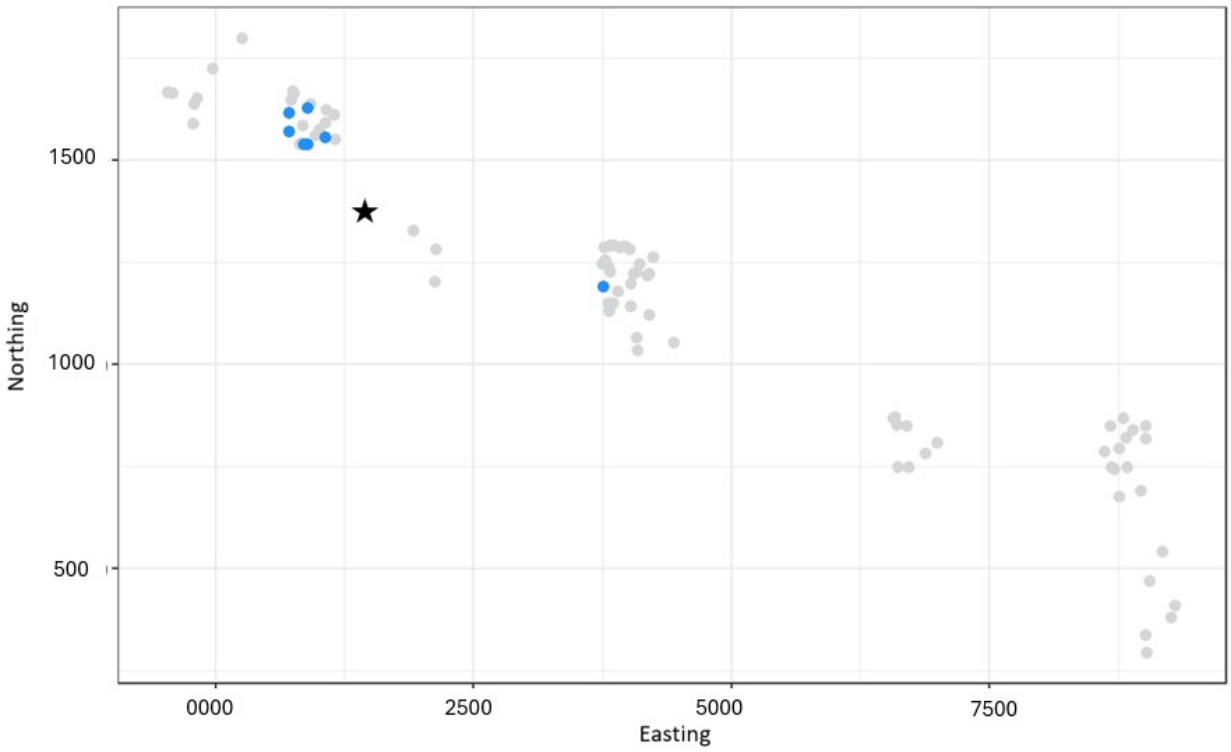


Figure D.18. Absent heads at GSENM.

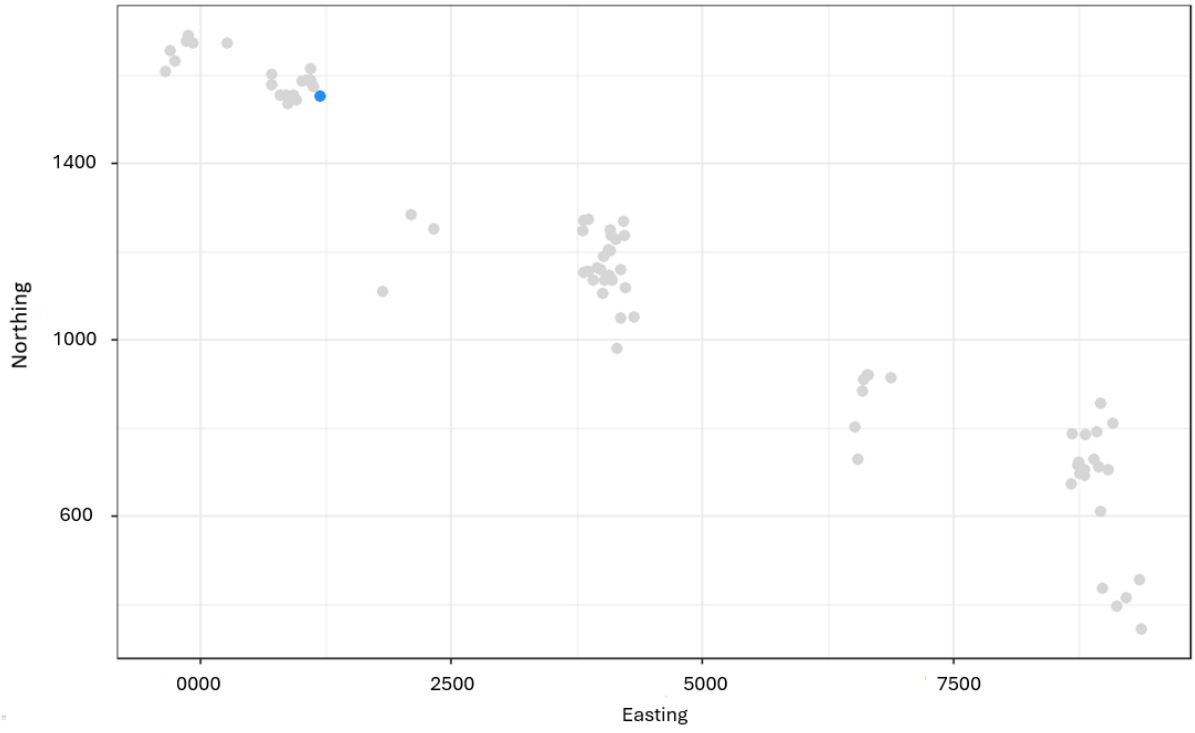


Figure D.19 “Other” heads at GSENM.

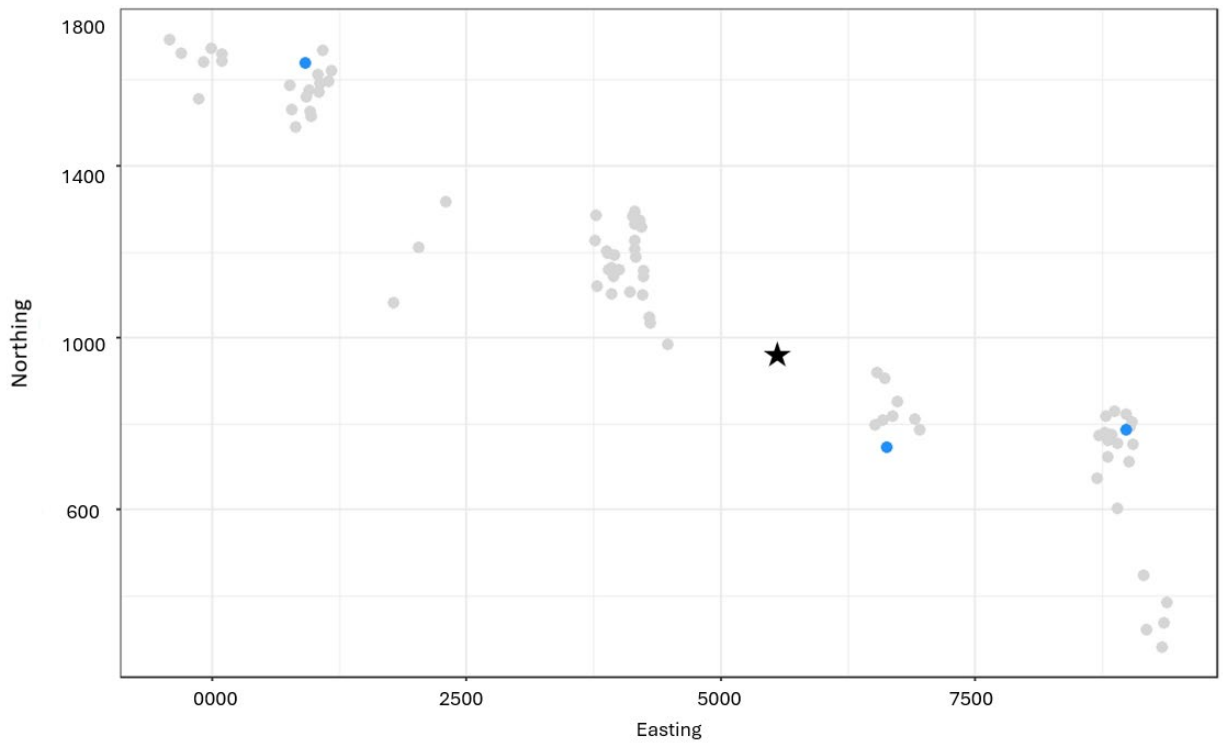


Figure D.20. Inverted Triangle heads at GSENM.

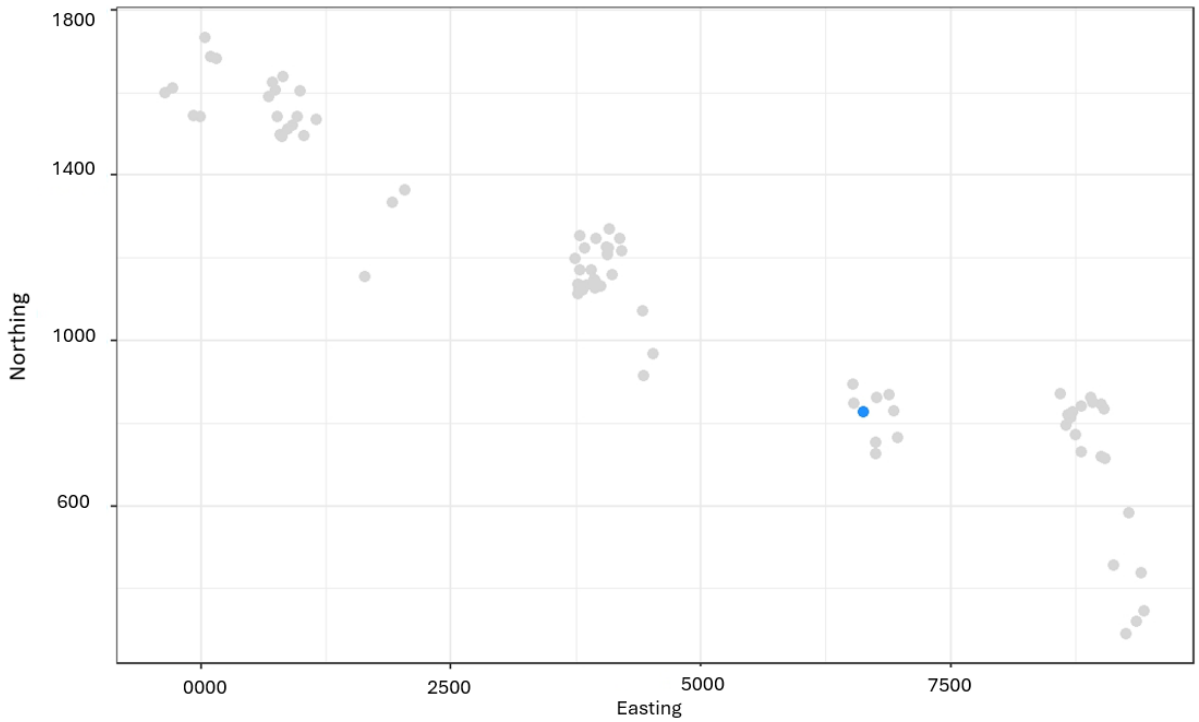


Figure D.21. Triangle heads at GSENM.

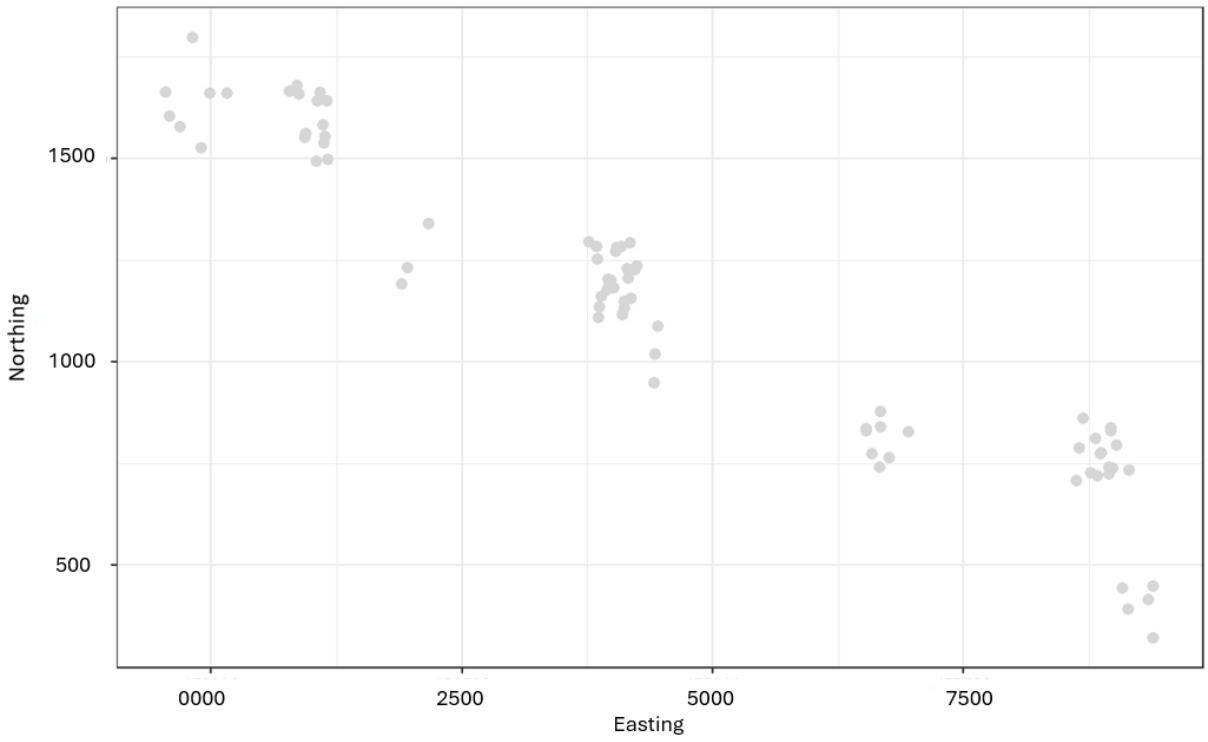


Figure D.22. Stick, inverted thumb, inverted bucket, implied heads at GSENM.

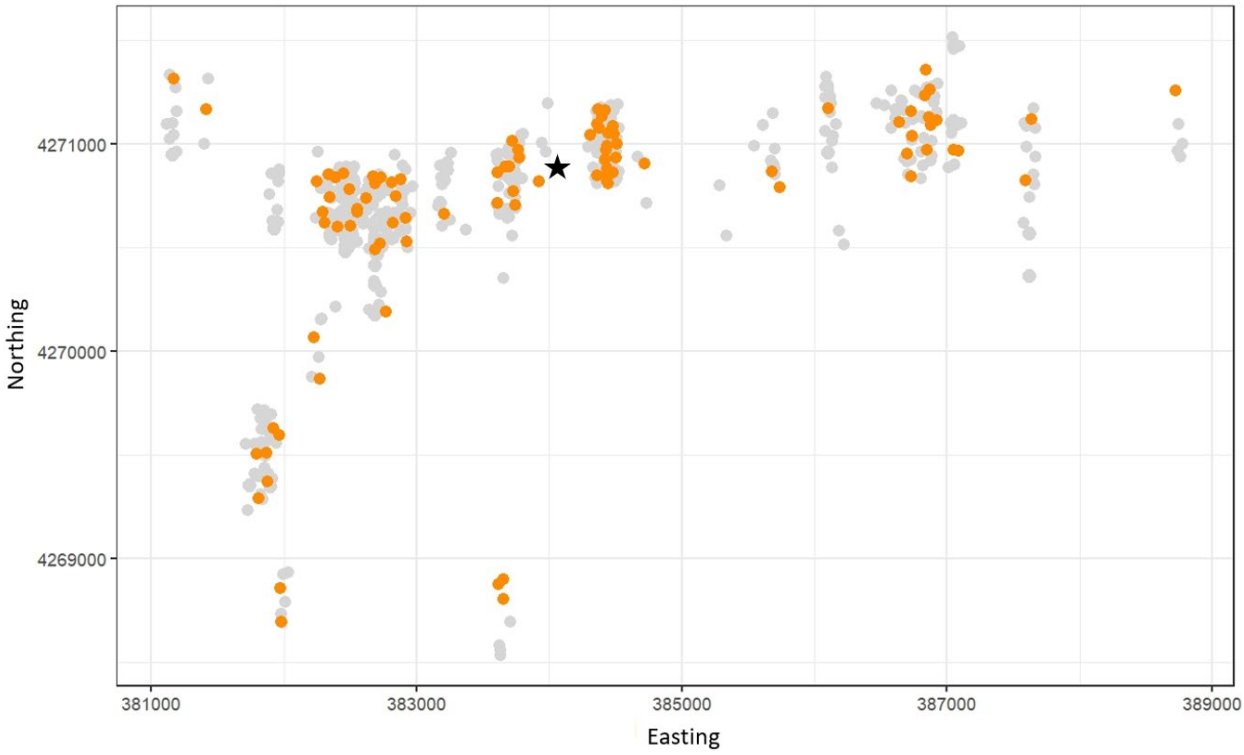


Figure D.23. Bucket bodies at CCC.

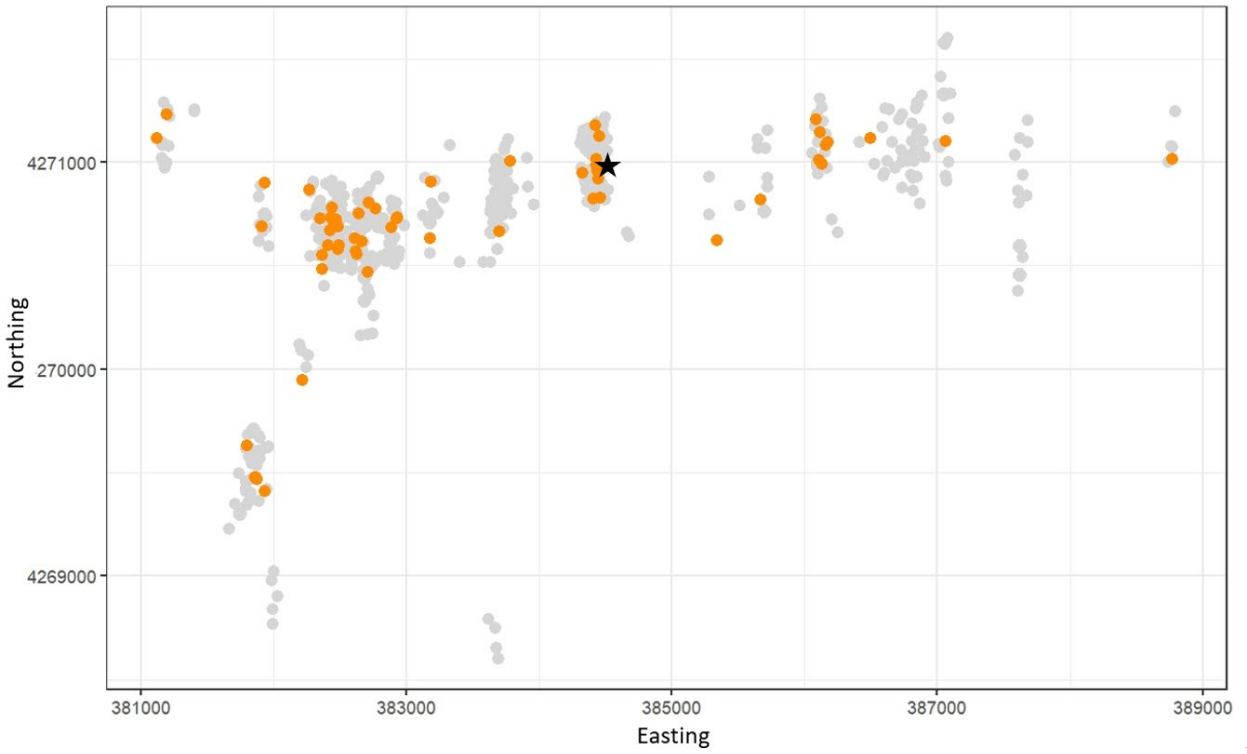


Figure D.24. Bucket, rectangular base bodies at CCC.

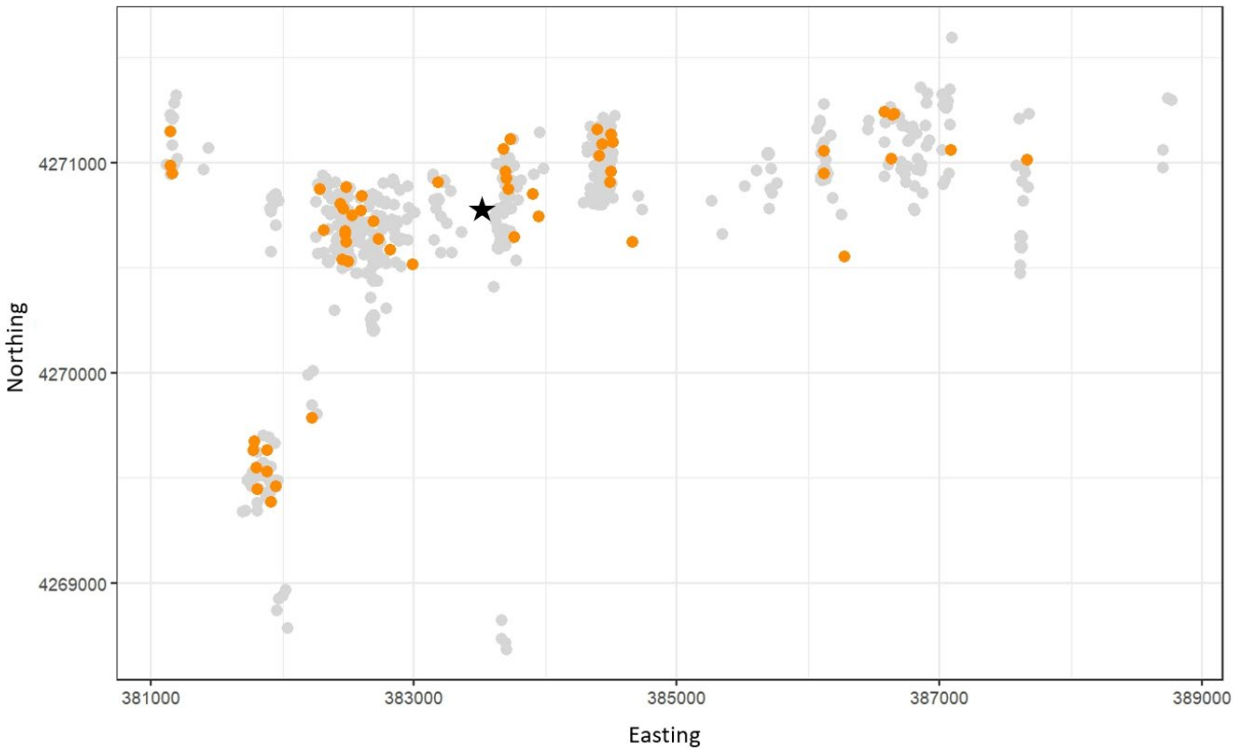


Figure D.25. Rectangular bodies at CCC.

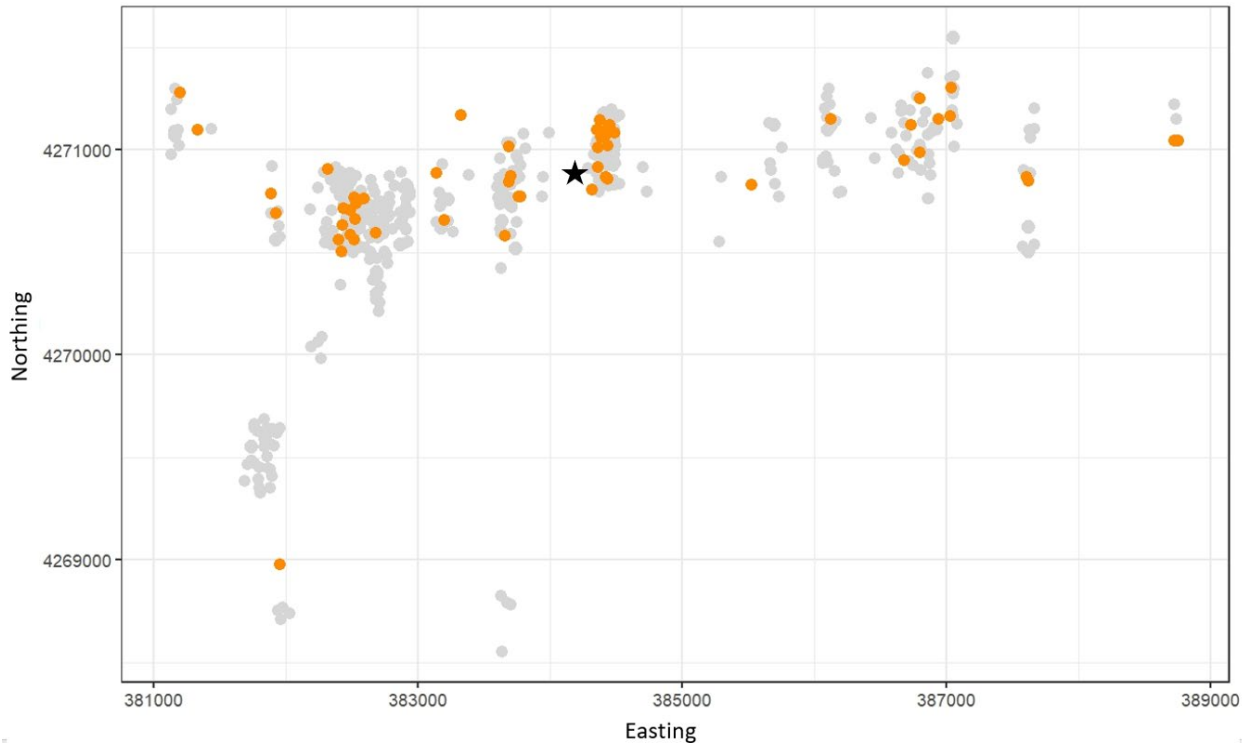


Figure D.26. Triangle bodies at CCC.

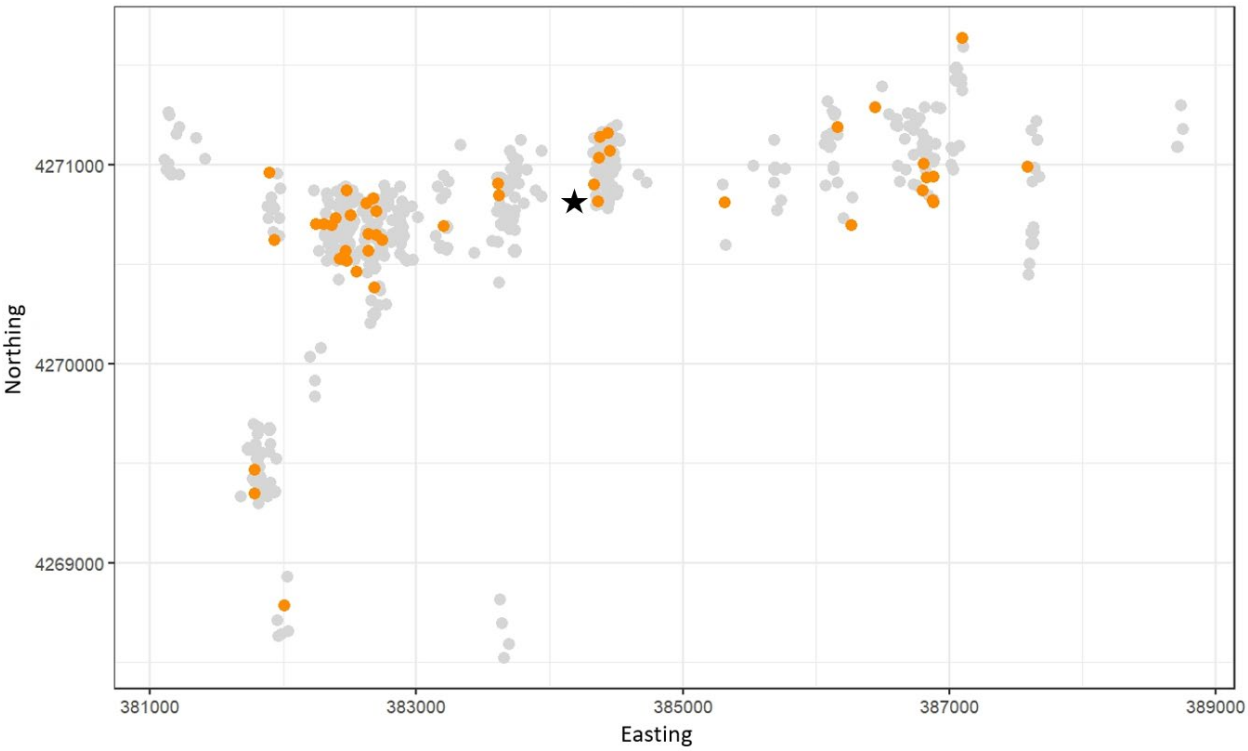


Figure D.27. Bucket, flared base bodies at CCC.

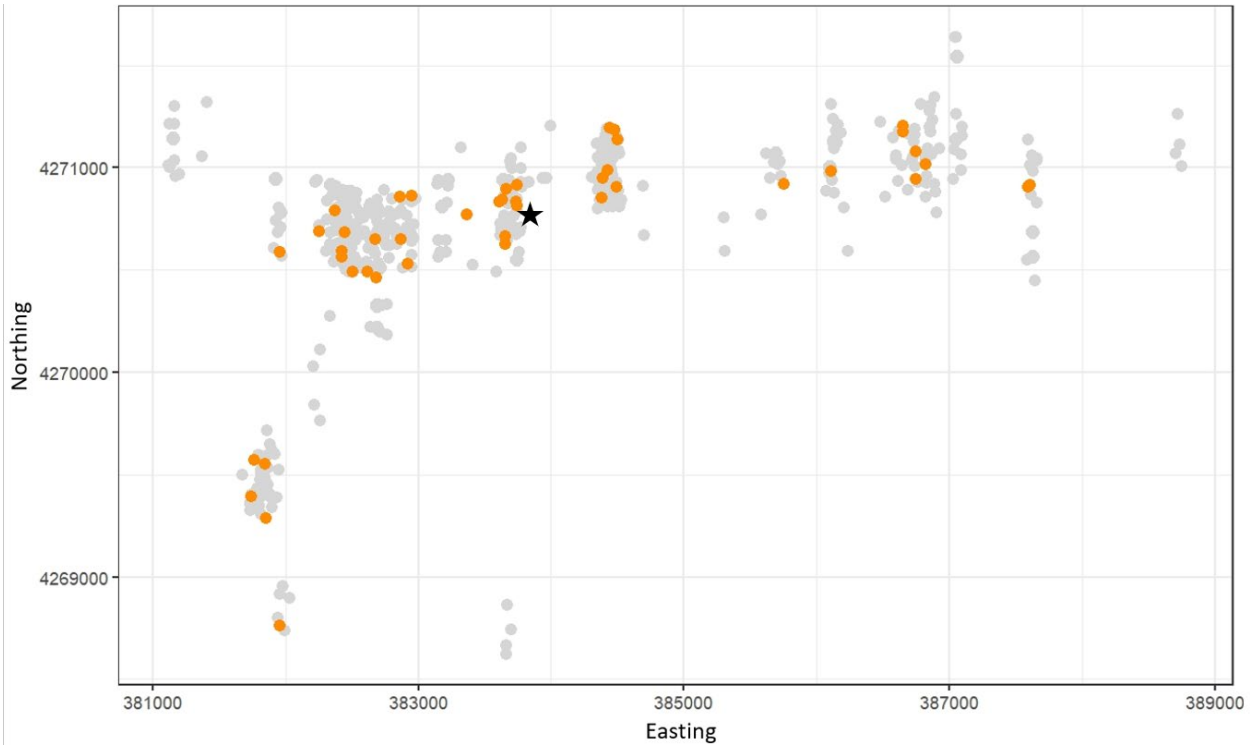


Figure D.28. “Other” bodies at CCC.

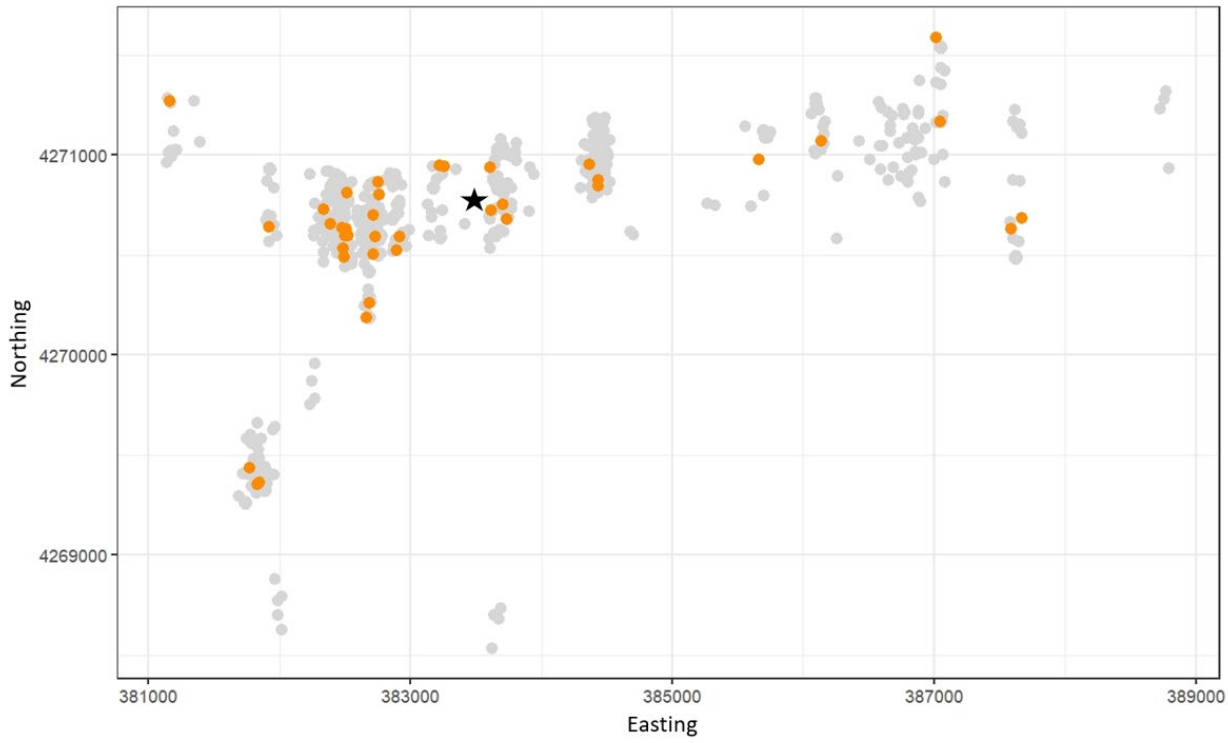


Figure D.29. Stick bodies at CCC.

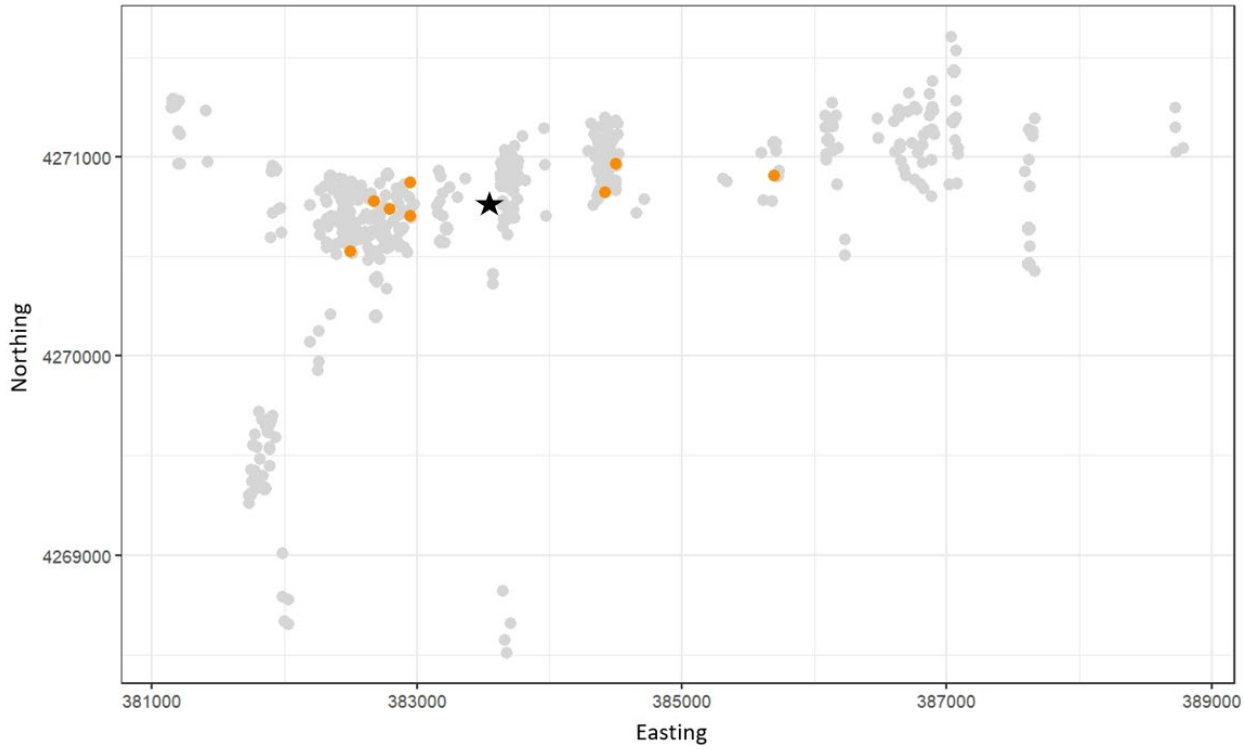


Figure D.30. Circular bodies at CCC.

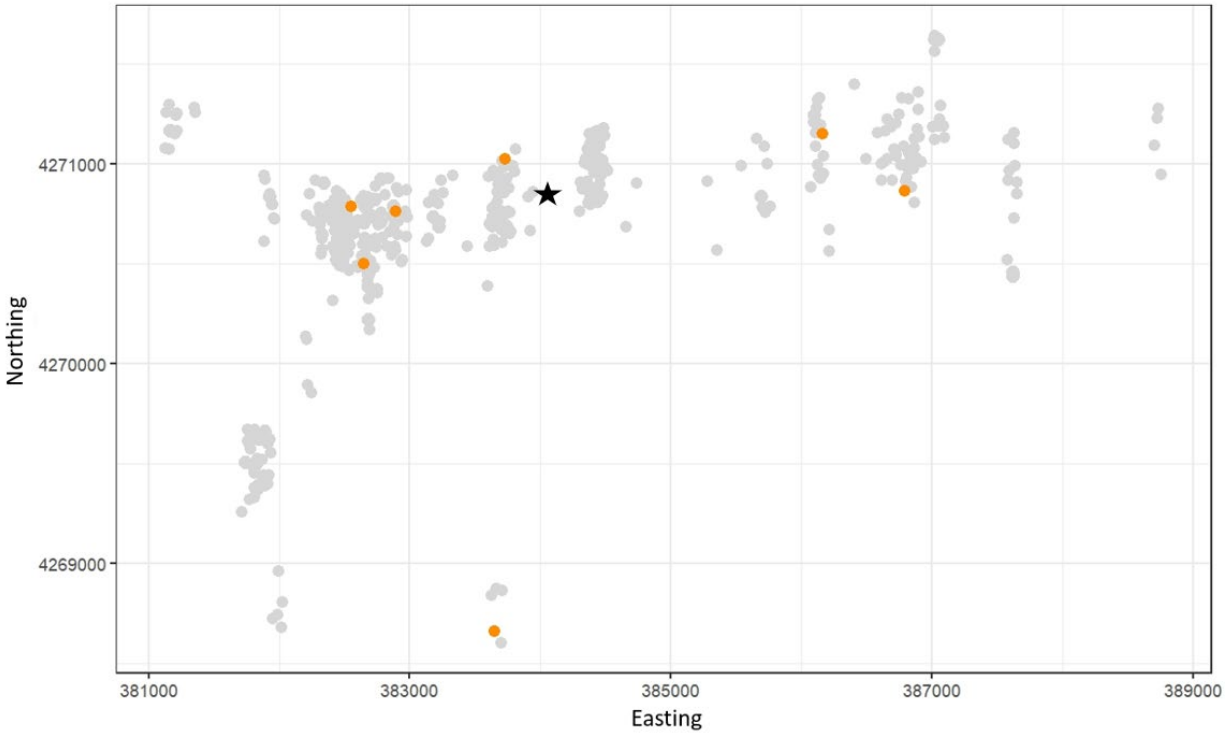


Figure D.31. Oval bodies at CCC.

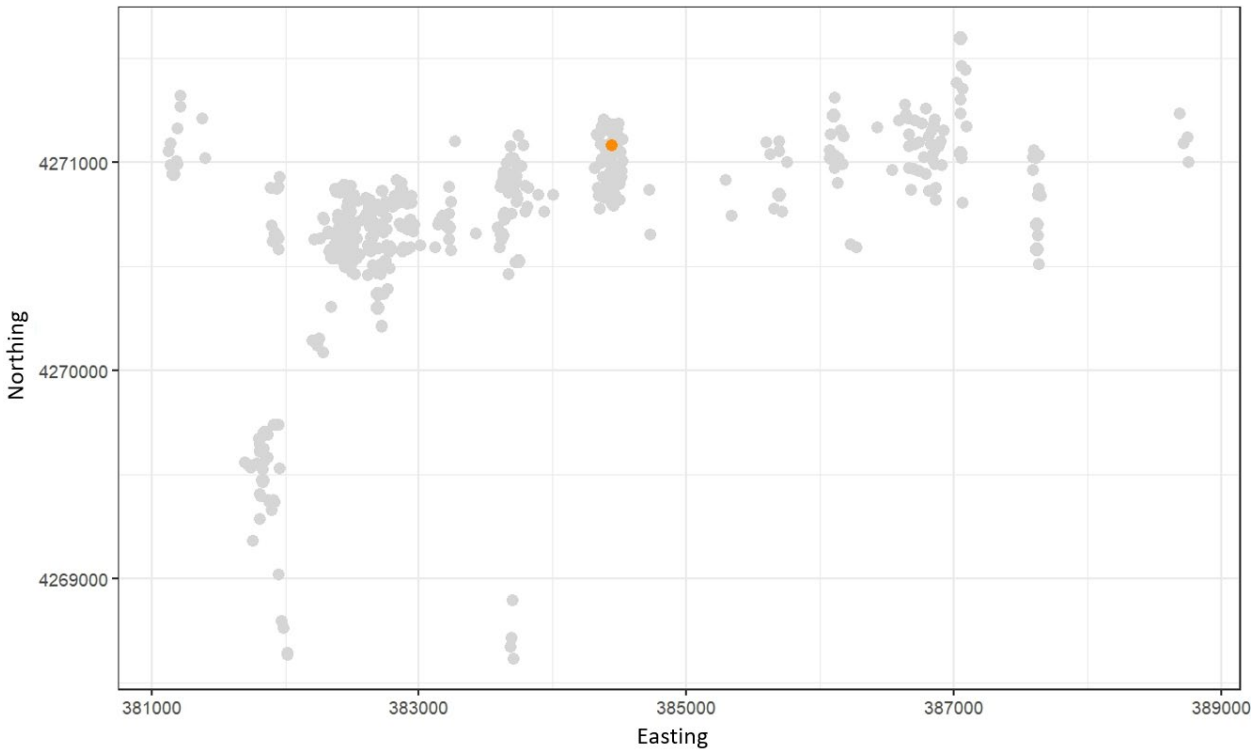


Figure D.32. Absent bodies at CCC.

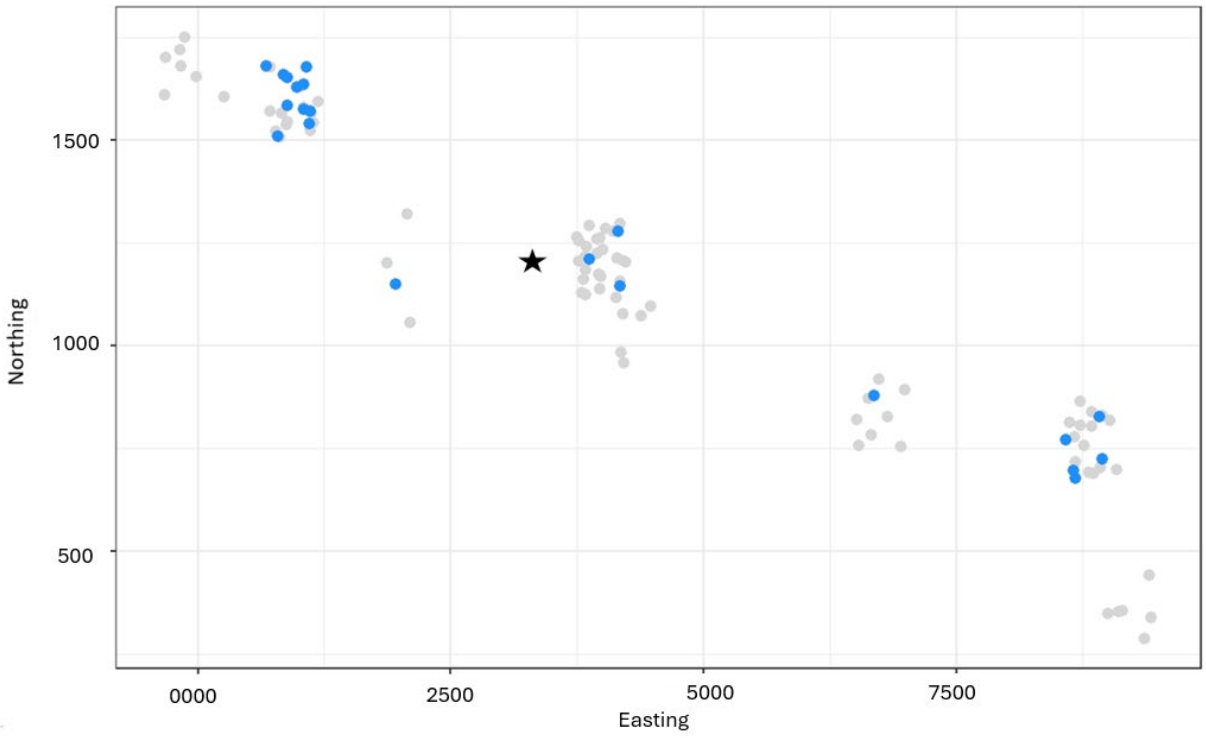


Figure D.33. Bucket bodies at GSENM.

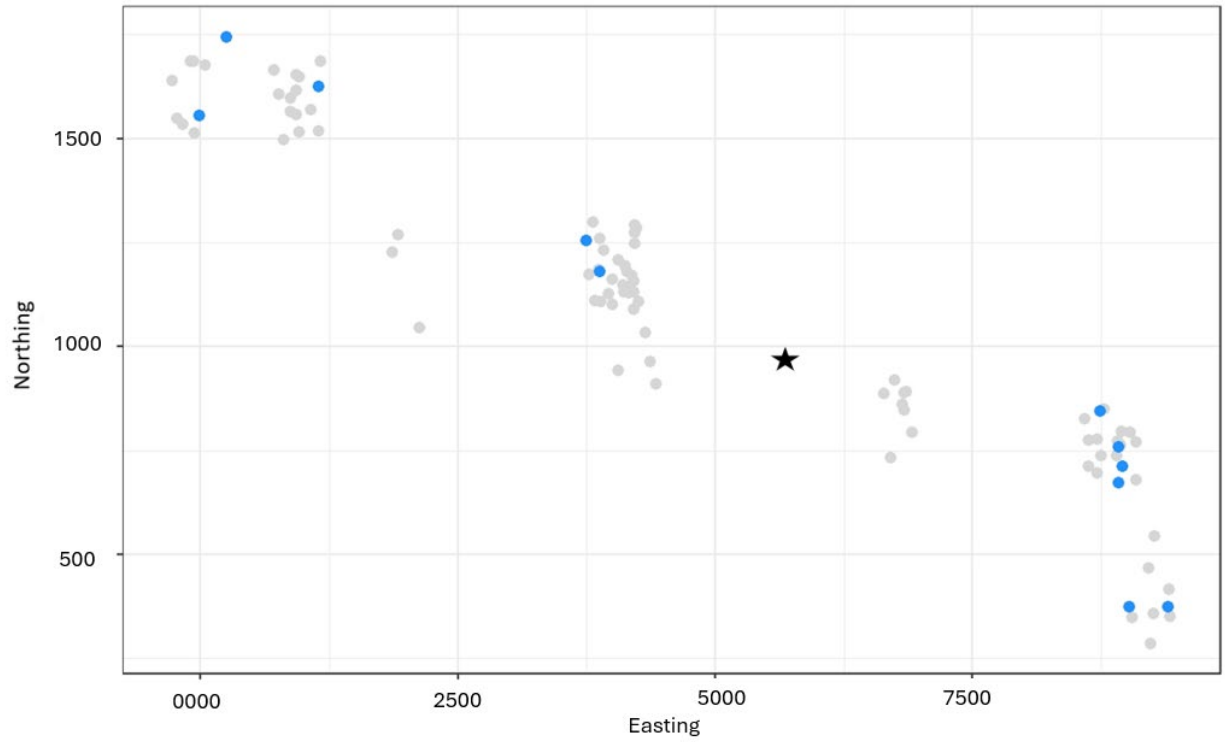


Figure D.34. Bucket, rectangular base bodies at GSENM.

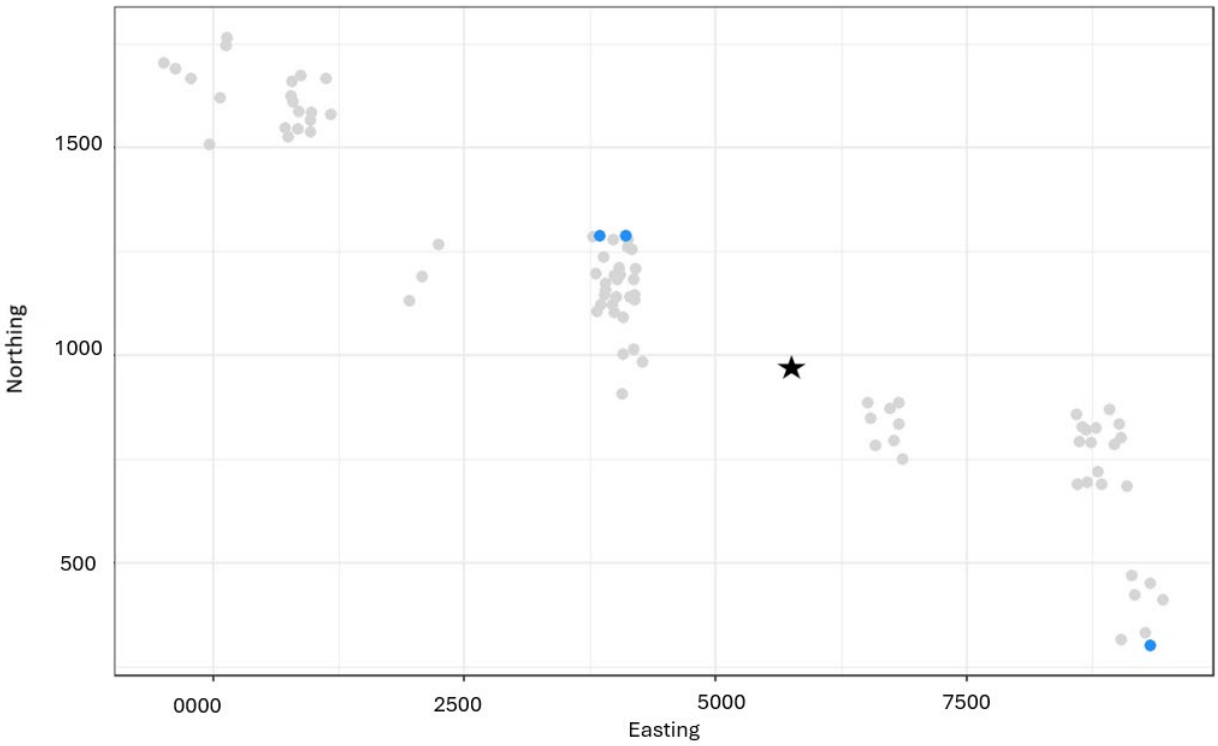


Figure D.35. Rectangular bodies at GSENM.

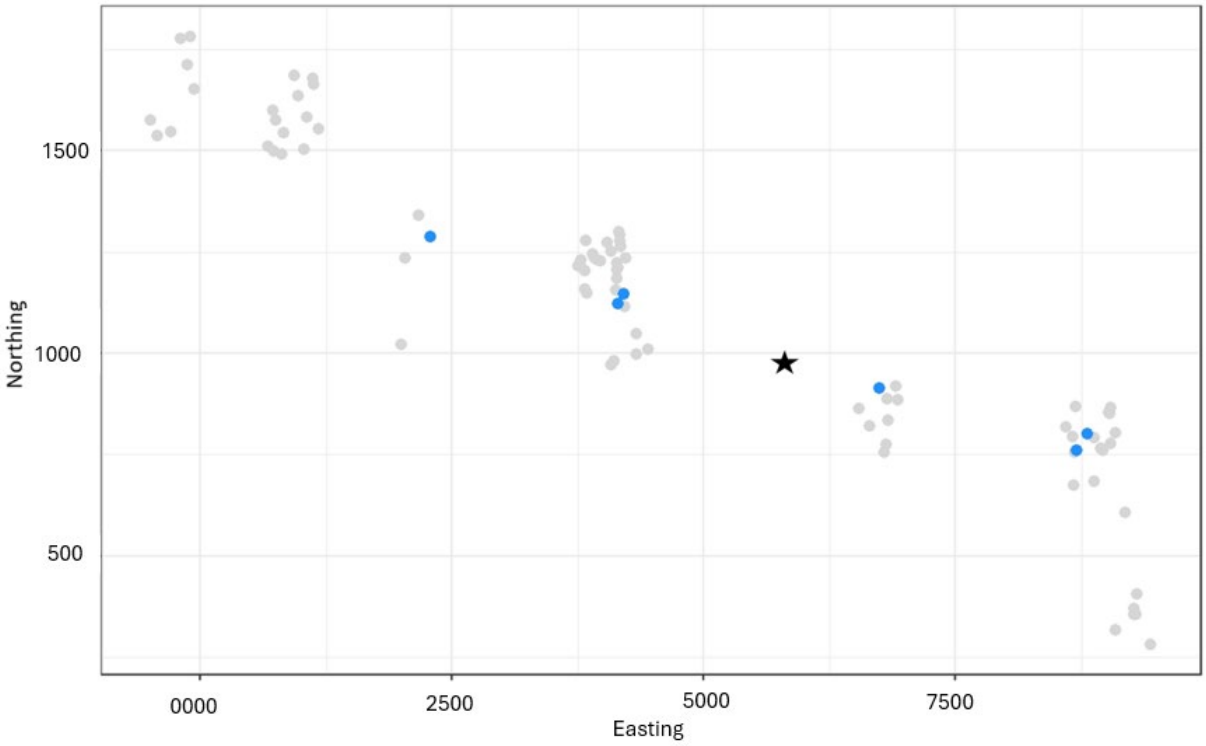


Figure D.36. Triangle bodies at GSENM.

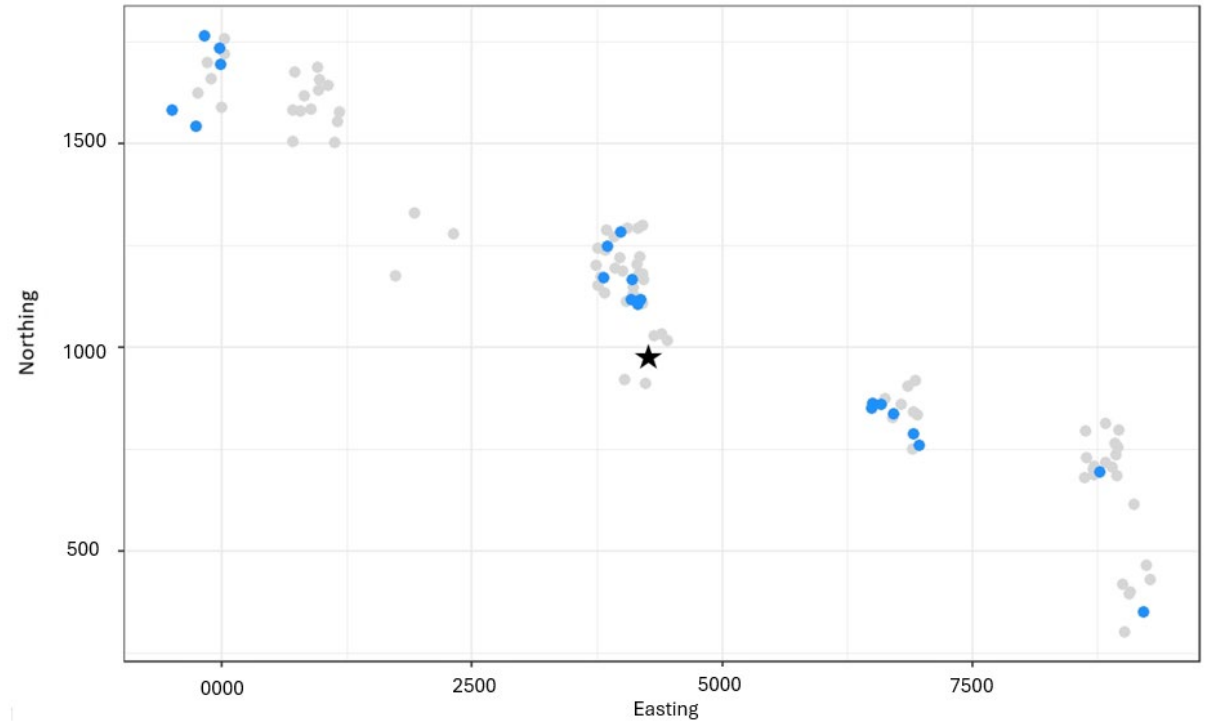


Figure D.37. Bucket, flared base bodies at GSENM.

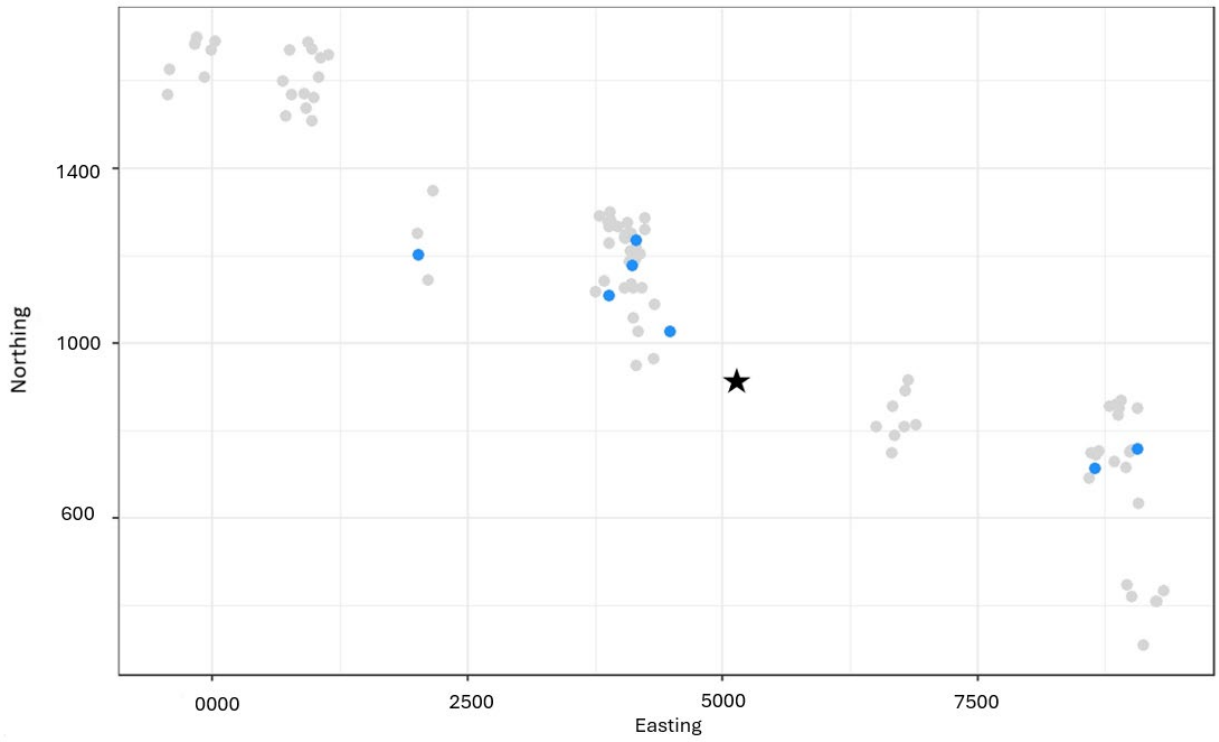


Figure D.38. “Other” bodies at GSENM.

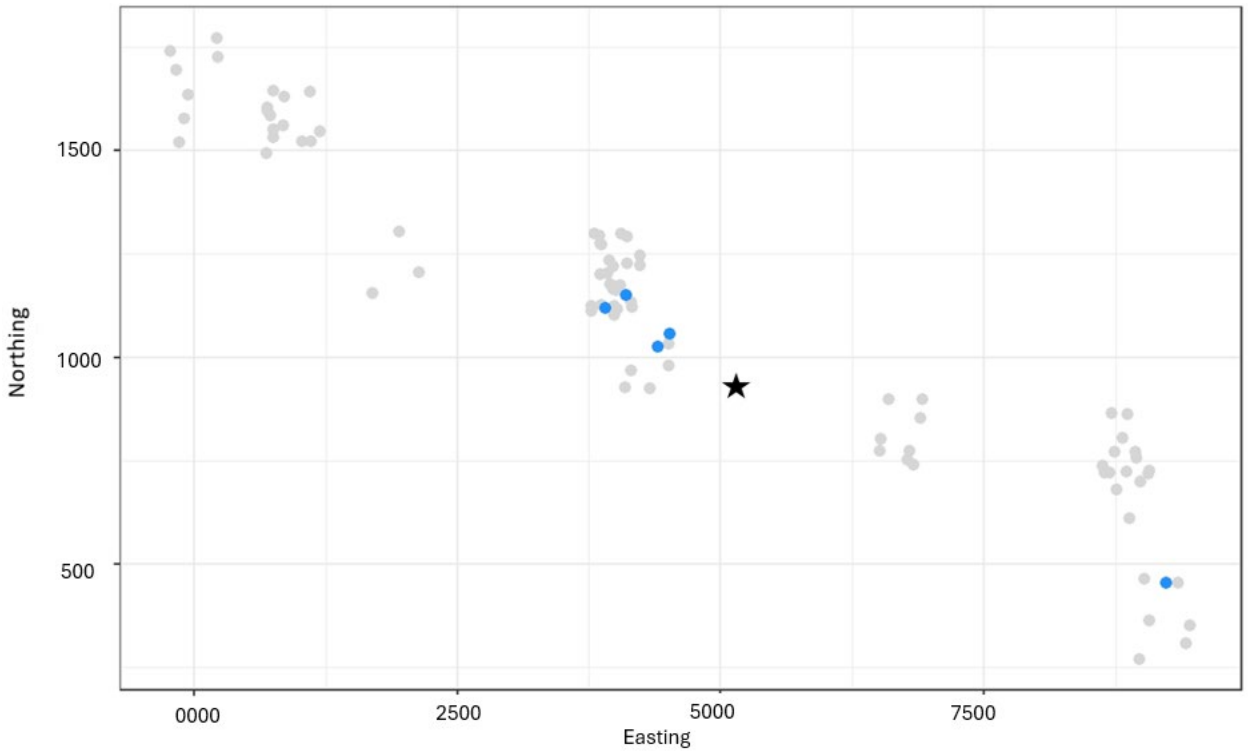


Figure D.39. Stick bodies at GSENM.

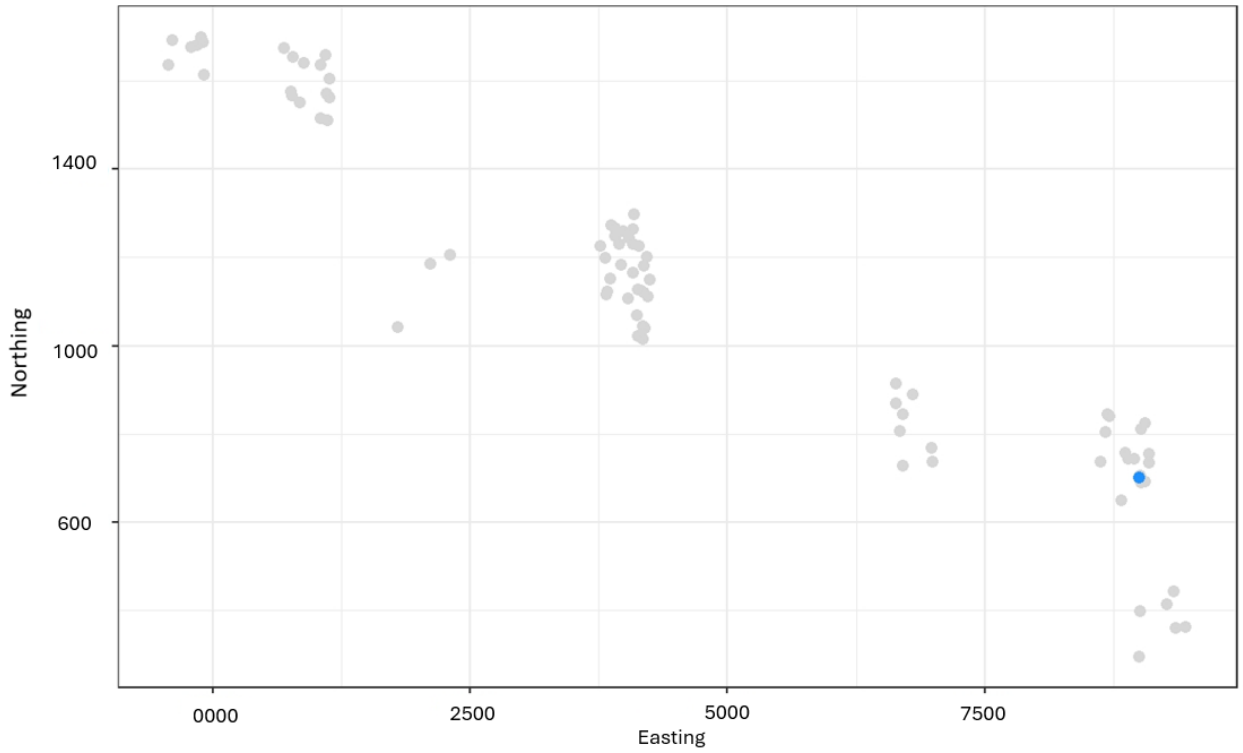


Figure D.40. Circular bodies at GSENM.

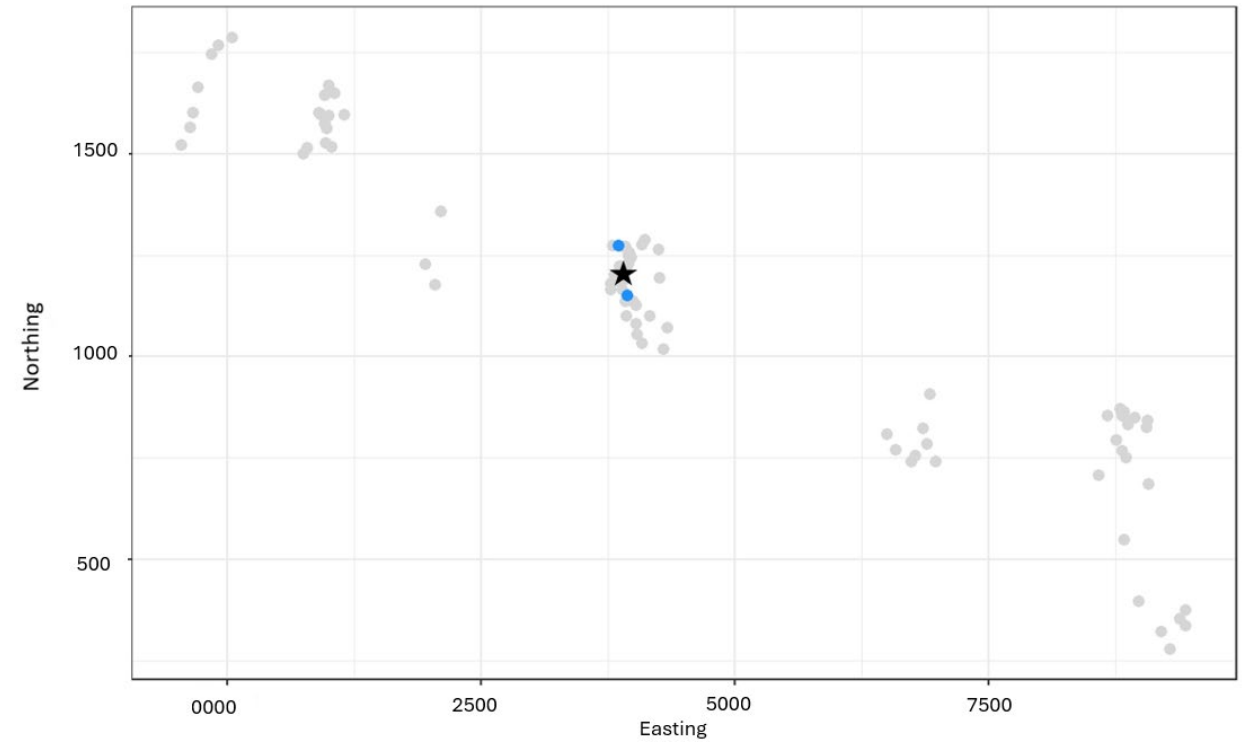


Figure D.41. Oval bodies at GSENM.

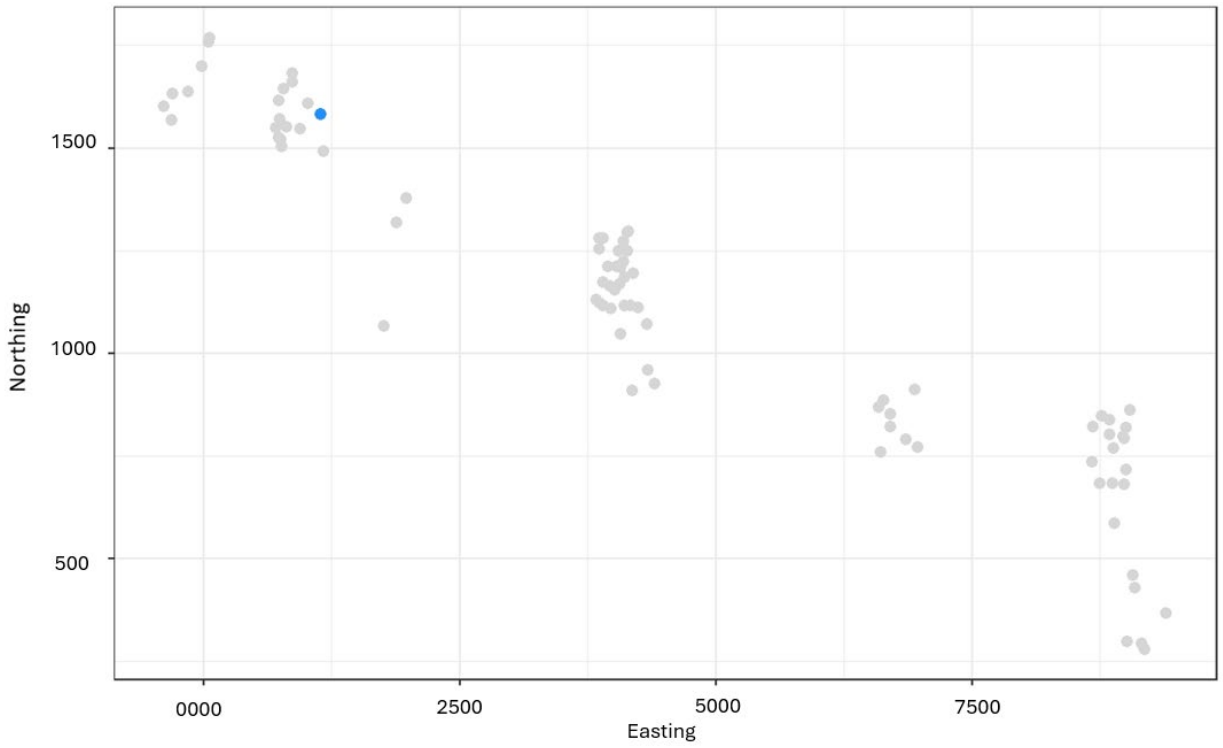


Figure D.42. Absent bodies at GSENM.