

BEARS EARS

ARCHAEOLOGICAL EXPERTS GATHERING



Assessing and Looking Ahead

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Cover image: Pueblo III period cliff dwellings at a site in the eastern portion of Bears Ears National Monument. PHOTO: © ADRIEL HEISEY



Archaeology Southwest



Friends of Cedar Mesa

Bears Ears Archaeological Experts Gathering

The Bears Ears National Monument was established through a presidential proclamation, under the Antiquities Act of 1906, by President Barack Obama on December 28, 2016. Bears Ears National Monument covers some 1.35 million acres of federal land in southeastern Utah managed by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). Bears Ears National Monument will be managed cooperatively between BLM and USFS in collaboration with the five-member Bears Ears Tribal Commission. The BLM, USFS, and Tribal Commission are in the initial stages of drafting a management plan for the new national monument.

This report shares the outcomes of a two-day gathering of archaeologists who work or have worked within what is now Bears Ears National Monument or in southeastern Utah more generally. Our gathering sought to tap their pool of professional knowledge to help land managers and the general public better understand the scope and meaning of archaeology in Bears Ears National Monument and the surrounding region. We also sought to identify a group of researchers who were interested in engaging with issues related to research on and management of Bears Ears National Monument's archaeological resources going forward. This pro bono effort is solely advisory.

Specifically, nonprofit organizations Archaeology Southwest and Friends of Cedar Mesa invited just over 60 professional archaeologists with relevant expertise to gather in Bluff, Utah, on July 22 and 23, 2017. Attendance at the session included 29 of the invitees (see list of participants on page 50). We structured the meeting according to a process Archaeology Southwest developed that has proven to be efficient and effective for guiding in-person expert participation in other large-scale planning contexts.

We explicitly recognize that Bears Ears National Monument is a landscape-scale administrative unit. Therefore, it is essential to consider the many ways in which *past cultural landscapes* are reflected within and beyond the new national monument. Participants in the session explored key research issues that could

For hundreds of generations, native peoples lived in the surrounding deep sandstone canyons, desert mesas, and meadow mountaintops, which constitute one of the densest and most significant cultural landscapes in the United States.

The landscape is a milieu of the accessible and observable together with the inaccessible and hidden.

Two quotations from "Presidential Proclamation—Establishment of Bears Ears National Monument," President Barack Obama, December 28, 2016

help address interpretive and management efforts within this cultural landscape perspective. The recognition that Bears Ears National Monument is a natural and cultural landscape is clearly stated in a dozen places throughout the presidential proclamation that brought it into existence. It is a consistent theme throughout this report, as well.

PREPARING FOR THE MEETING—THE SCALE OF PAST WORK

To prepare for the experts gathering, Friends of Cedar Mesa compiled a list of more than 200 published and unpublished references related to the archaeology of Bears Ears National Monument and its immediate surroundings. Participants in the Bluff session subsequently added another 150 relevant citations.

Another way to measure the scale of previous work within Bears Ears National Monument is a simple count of the number of known archaeological sites. A partial site inventory compiled by two meeting attendees contained roughly 6,500 sites, but those sites were all recorded before 1993 and clearly represent an underestimate. Following the meeting, we contacted the Utah Division of State History, which maintains the state's official inventory of archaeological sites. Fortunately, they had prepared a tally of the numbers of known sites within Bears Ears National Monument in February 2017. Their site count within Bears Ears National Monument is 8,480, though they acknowledge that sites known from many older academic projects and more recent cultural resource management projects are not yet included in that total.

Despite consulting with experts and official records, we are still obliged to estimate the number of known sites and the projected total number of sites present on the Bears Ears National Monument landscape. It is estimated that at least several thousand known sites within Bears Ears are not included in the official state database, and it is also estimated that no more than 10 percent of Bears Ears has been surveyed. Based on this, a total of at least 100,000 sites is a very reasonable minimum estimate for the entire monument.

Wrapping up on Sunday afternoon, R. E. Burrillo, left, led the discussion of future research issues. Jim Allison, right foreground, has the microphone and is speaking. PHOTO: WILLIAM H. DOELLE



THE EXPERTS MEETING

Archaeology Southwest often uses expert-guided planning sessions to develop strategies for protecting archaeological sites across large landscapes. The key to success is to have everyone focused on a real-time information display. In Bluff, we gathered in the community center, where attendees were arrayed at tables facing a large screen, and we projected maps on that screen from a computer equipped with a geographic information system, or GIS. Although Archaeology Southwest provided general facilitation, individual experts led discussion about an area they knew well, and then all others had an opportunity to comment or add information. Catherine Gilman plotted each specific area identified by an expert with the GIS and assigned it an identification number; Kate Sarther Gann typed notes that attached the expert's name and comments to that place. The assembled experts brought from "many years" to "many decades" of relevant experience to the gathering. Everyone had an opportunity to speak, and most shared many times throughout the session. Through this process, we gathered a great deal of information in a remarkably short time.

The agenda began with introductions followed by a brief description of the expert-guided planning process. Then we began a very thorough process of talking about each of the ten subareas of Bears Ears National Monument. That required about seven hours. We then devoted several more hours to developing consensus maps of where past people lived within the monument area for eight time periods that spanned thousands of years. The final group discussion addressed future research priorities. This was a very engaged group of individuals—even over dinner and socializing, everyone continued intense discussion. As historian Fred Blackburn commented, "We'll never again see such an incredible gathering as this in our lifetimes."

ABOUT THIS REPORT

Although we are reporting on expert insights, we attempt to offer a non-technical overview. First, we place Bears Ears National Monument in its physical landscape (pages 7–8) and outline how archaeologists organize their thinking about how people lived on the Bears Ears National Monument landscape over a vast span of time—at least 13 millennia. We present the chronology archaeologists

use to describe patterns in human lifeways on Bears Ears National Monument and how and when those lifeways changed (pages 9–11).

A special section lays out the basics of how archaeologists study people's lives in the past (pages 12–15). We describe and illustrate some of these concepts as they relate to the specific



Ancient kiva with replica ladder, Bears Ears National Monument.

PHOTO: R. E. BURRILLO

findings in this report. This is part of the common background that participants brought to our meeting in Bluff, and it sets the stage for understanding the insights we report here.

Next, we present the three main work products that emerged from the gathering. First is a set of population “intensity” maps that illustrate the current consensus of the experts (pages 16–26). This series of maps conveys the long ebb and flow of human life on this landscape.

Some discussion in Bluff highlighted the fact that peoples of the Bears Ears National Monument had ties to groups and cultural phenomena in other parts of the ancient Southwest. We touch on some of those regional relationships with a second series of maps (pages 27–31).

We provide a third set of maps that traces the distribution of rock art styles across the Bears Ears National Monument area (pages 32–40). This set conveys how people expressed their identity and aspects of their ideology directly onto this dynamic cultural landscape. We also show examples of some of these rock art styles.

Finally, we discuss some of the research priorities identified by the gathered experts (pages 41–44). We also consider how our landscape-scale approach has developed within archaeology as this scientific and humanistic discipline has itself matured over more than a century.



Left and below: *Cliff dwellings in Bears Ears National Monument.*

PHOTOS: R. E. BURRILLO



Bears Ears National Monument and Its Physical Setting

The buttes known as the Bears Ears (below) provide a distinctive landmark by which people in the past would have oriented themselves to the landscape, just as visitors and residents do today. The Colorado River and its major tributary, the San Juan River, are natural boundaries that past peoples would have closely attended to. The Abajo Mountains extend above 11,000 feet. As the highest elevation lands in Bears Ears National Monument, they are visible throughout most of the monument. Another prominent landscape element is Comb Ridge, an extensive north–south sandstone spine dense with archaeological sites (below right). Cedar Mesa rises above the south-central portion of Bears Ears National Monument, and Grand Gulch (page 8) is an impressive complex of canyons cut into the landscape just west of Cedar Mesa.

Other nationally designated areas of distinctive natural, cultural, and recreational resources lie in this region. Natural Bridges National Monument is set within the south-central portion of Bears Ears National Monu-



Right: *Aerial View of Comb Ridge.* PHOTO:

© ADRIEL HEISEY **Below:** *Bears Ears buttes.*

PHOTO: R. E. BURRILLO



ment. Glen Canyon National Recreation Area and Canyonlands National Monument are adjacent to Bears Ears National Monument's western boundary. Bears Ears National Monument is 50 miles west of Mesa Verde National Park and roughly half that distance from Canyons of the Ancients National Monument. Chaco Culture National Historical Park is located about 150 miles to the southeast. Connections to all of these areas were of great importance to people in the distant past (pages 10–11 and 42–43).



Top: Horseshollar Ruins in nearby Natural Bridges National Monument. PHOTO: JACOB W. FRANK, COURTESY OF THE NPS **Bottom:** Mesa Arch in nearby Canyonlands National Park. PHOTO: KIRSTEN KEARSE, COURTESY OF THE NPS **Left:** Aerial view of Grand Gulch in evening light, with Bears Ears and the Abajo Mountains on the horizon. Ancient and historical trails provided access through this formidable landscape. PHOTO: © ADRIEL HEISEY

Bears Ears National Monument in the Distant Past: Making a Living from the Land

The archaeological record documents very long time spans, and over those centuries and millennia the people of the northern Southwest experienced many changes in their lifeways and how they related to their neighbors. There is no one way to think about life in that distant past, but archaeologists often focus on how people made a living. The names and dates for time periods we use here were developed by archaeologists in the 1920s, and have continued forward with various refinements. The following are brief descriptions of peoples' lifeways in the northern Southwest through time.

MOBILE HUNTING AND GATHERING

- » **Paleoindian period (11,000–6000 BC)**—Small groups ranged over large territories and hunted now-extinct mammals.
- » **Archaic period (6000–2000 BC)**—Groups foraged seasonally over smaller territories, eating a variety of plants and animals and using grinding tools to process seeds.

Prior to the arrival of domesticated maize (corn) about 4,000 years ago, living off the land was the primary way to survive. And survival wasn't determined at the level of individual families—it required maintaining social relationships with larger groups of relatives and acquaintances who shared common interests and commitments to share food, information, and other resources. When hunting and gathering was the sole way of supporting a family and a larger group, willingness to move to where food resources were available was essential. People needed to know their local and regional environment, and they needed to be able to give and receive information with other mobile groups.

The primary factors in thinking about this lifeway relate to the distribution of food resources, how they might vary from year to year, and how relations with other social groups might enhance or restrict a group's access to resources. Although mobility was always a key, the distances people traveled over the annual round were determined by the density, distribution, and reliability of food resources.

HUNTING, FORAGING, AND FARMING

- » **Early Agricultural period (2000–500 BC)**—Some groups of people grew corn, but they did not rely on it as a staple food. People used natural shelters for camping and storage, and sometimes used poles, brush, and mud to build houses on open ground.

The environmental diversity of Bears Ears National Monument presented highly variable opportunities for farming. Thus, in some areas of this landscape—and during this and later time periods—peo-

The Sacred Landscape

Archaeologists have developed several approaches to understanding how people expressed their ideologies in artifacts, artistic images, pottery decorations, and public architecture. By doing so, they communicated their cultural identity within their own group and with outsiders they interacted with. In Bears Ears National Monument, two lines of evidence are already being explored, and there is a third that holds great potential.

Archaeologists have documented **rock art styles** across the Four Corners region, and the ways in which these styles changed over some 4,000 years are broadly understood (pages 32–40). The distribution of these styles across the Bears Ears National Monument landscape reflects the general locations of human groups that shared common beliefs, or they may illustrate where differing world views came into contact or even conflict. There is a great deal more to learn about the role of rock art among past human groups, and Bears Ears National Monument has such a rich body of rock art that the potential for new insights is unlimited (page 42).

Public architecture is another major expression of group-level

ple probably invested some effort in growing crops while also pursuing hunting and foraging as an important subsistence option. In general, people's adoption of agriculture would have reduced the territory sizes groups needed for subsistence success.

SEDENTARY FARMERS

- » **Basketmaker II period (500 BC–AD 500)**—People farmed corn as a staple food and they domesticated turkeys. In addition to natural shelters, people lived in clusters of dwellings dug into the ground (pithouses).
- » **Basketmaker III period (AD 500–750)**—People made pottery and began growing beans. They adopted the bow and arrow to replace spear-throwers (atlatls) and darts. Households lived close to their fields in dispersed clusters of pithouses. Some places had community centers (great kivas).
- » **Pueblo I period (AD 750–900)**—In some areas, people lived in large villages comprising a number of households. Each household had a pit structure and a few surface rooms made of poles and mud or rudimentary masonry. Many larger villages had great kivas.
- » **Pueblo II period (AD 900–1150)**—Potters made a greater variety of vessel shapes and surface decorations. Living quarters included a small household kiva and a few surface rooms, typically built of stone masonry. Chaco Canyon became a region-wide center, and people north of the San Juan River began to build smaller versions of Chaco-style great houses. Dispersed groups of households formed communities around a great kiva or a great house, or both.
- » **Pueblo III period (AD 1150–1290)**—Population boomed in areas to the east of Bears Ears National Monument. Increasingly, people moved into large, canyon-oriented villages, building remarkable cliff dwellings. Warfare was common in the 1200s. By 1290, people had moved away from the Four Corners area to establish communities to the south, southeast, and southwest, where related Pueblo populations were on the rise.

In some areas of Bears Ears National Monument, agricultural productivity was sufficient to support a largely sedentary way of life. Even in Basketmaker II times, evidence shows a very strong dependence on maize as a food source in the Cedar Mesa area. By around AD 700, available varieties of maize had become more productive, people had added beans and squash to their crops, and hunters had adopted bow-and-arrow technology. Though these people are referred to as “sedentary farmers,” they still would have pursued gathering activities near their

ideology and identity. In Bears Ears National Monument there are a number of forms of public architecture that gained prominence during certain time periods, and these help shed light on regional ideology and identity. Great kivas (page 10), Chacoan great houses (page 10), specific kiva construction styles and shapes, and tower architecture (page 28) are the major forms of public architecture archaeologists have documented in this region.

Researchers have made great progress in applying **social network analysis** to archaeological information about artifacts. Although painted pottery is an ideal information source, there are other potential items to trace: raw materials used to make stone tools and structures, for example, show great promise for ever-more-refined ways of identifying social networks in the past. This is another direction for future research (pages 41–44).

home base, and hunters may have ventured even farther away. Furthermore, most settlements were relatively small and households were dispersed across the landscape, living close to their fields.

***Why AD 1290?** How do archaeologists know that date so seemingly precisely? Because samples of wood beams from cliff dwellings and other architecture have been dated through dendrochronology, also known as tree-ring dating. New construction dates decline dramatically by 1250, and the latest construction dates fall just before 1270. Archaeologists infer that within the next 20 years, all Ancestral Pueblo residents had departed.*

NOMADS AND NEWCOMERS

» **Protohistoric (AD 1290–1500) and Historic periods (AD 1500–present)**—Resilient tribal groups faced the coming of European colonists and the westward movement of Euro-American settlers.

In a time of great cultural and religious change for their peoples, Pueblo groups formed large villages with plazas in the Rio Grande, Hopi, Zuni, Acoma, and Laguna areas. They continued to grow corn, beans, squash, and cotton. Some took on domesticated animals brought with European colonists. Pueblo peoples maintained cultural, spiritual, and economic ties to the Bears Ears National Monument region after their great departure.

First, Utes and Paiutes from the Great Basin to the west, and then Navajos from the upper San Juan area to the east began to sparsely inhabit the Bears Ears National Monument region formerly populated by Pueblo groups. Horses were very important to these nomad groups, who had a foraging-hunting way of life.

European colonists and Euro-American settlers were farmers, herders, trappers, ranchers, and miners, among other diverse means of making a living. Pioneers of the Church of Latter-Day Saints established the community of Bluff after an arduous journey in the winter of 1879–1880 across parts of the Bears Ears National Monument landscape (page 31).

Archaeologist Benjamin Bellorado taking a tree-ring sample from an architectural beam. Analysis subsequently dated the structure to AD 1250. PHOTO: WINSTON B. HURST



Archaeological Evidence in Bears Ears National Monument

“Archaeological record” means material evidence from the past that is buried underground, visible on the ground surface, or pecked or painted on rock surfaces. Here are examples of the kinds of objects and materials that archaeologists see as particularly important for understanding people’s lives in Bears Ears National Monument in the past.

SINGLE ARTIFACTS

There are a few types of artifacts that provide a great deal of information about when or how they were used in the past, or both, even when found in isolation on the ground surface. For example, a complete Clovis point—a large and distinctive stone point that was likely attached to a hunter’s spear almost 13,000 years ago—was found along the southern margin of Bears

Ears National Monument. Its great age, the fact that it was made and used to hunt now-extinct large game animals, and the extreme rarity of these points make that single artifact a very important source of information (page 9).

Other examples of extremely informative single artifacts in the Bears Ears National Monument region include Archaic projectile points and pieces of a kind of pottery known as Hopi yellow ware. Archaic points show that people were present on the land even before farming was practiced in this region. The Hopi pottery dates to the 1300s or 1400s, after the Ancestral Pueblo people who had lived here moved out of the area. Another example is an ancient “yucca needle and cotton thread” combination found in an ancient room under a natural overhang.



Top left: Clovis projectile point made from fine-grained silicified gray sandstone. PHOTO: WINSTON B. HURST **Bottom left:** A classic Jeddito Black-on-orange pottery sherd. PHOTO: JONATHAN D. TILL

RESIDENTIAL SITES

Archaeologists tend to categorize these in terms of the relative amount of time people spent at a particular location as they made a living off the land.

- » A **camp site** might have been a place where a family, hunting party, or small group of families spent a day or so while hunting, gathering, or en route to a new location. Usually, they did not leave much evidence of their brief stay. These subtle sites reflect how people were using the Bears Ears National Monument landscape over many thousands of years.
- » **Seasonal sites** are places where people spent longer periods of time to harvest abundant wild resources, such as pinyon nuts, or to tend to their agricultural fields during the growing season. Because they represent a longer period of time spent in a single location, these sites tend to have more material evidence for the archaeologist to observe.
- » **Permanent settlements** generally require that inhabitants pursued a farming way of life. Residents of permanent settlements may have spent most of the year living and working with groups of other families. They invested in building permanent homes and other facilities. As a result, permanent settlements are usually larger, easier to observe today, and likely to have more—and more diverse—material left behind.

ROCK ART AND MURALS

Bears Ears National Monument is particularly rich in graphical depictions created by peoples who lived in or were passing through this area. Almost all rock art or murals are exposed on the present-



Yucca needle and cotton thread found in a kiva. Evidence shows that most cotton weaving occurred in kivas. This and other cotton production tools and waste materials are important evidence of the development and spread of the cotton-weaving industry in the northern Southwest—an industry that, for Mesa Verde peoples, was focused in the Bears Ears area. PHOTO: BENJAMIN BELLORADO



Finger-inscribed sandal designs on a plaster wall. PHOTO: BENJAMIN BELLORADO

day surface, on boulders, on architecture, or on canyon walls. Though sometimes protected from weather, as under a rock overhang or within a structure, the exposure of such expressions makes them particularly fragile and vulnerable to vandalism.

- » **Pictographs** are painted images. People used mineral-based pigments to produce striking colors such as red, green, white, yellow, and black.
- » **Petroglyphs** were scratched or pecked into the rock surface.
- » **Plastered surfaces** occur on interior and exterior walls of ancient structures. Ritual structures are the most common places to find incised, inscribed, and painted images, but people also made them in their dwellings.

SHRINES AND OTHER SPECIAL FEATURES

There are a wide variety of material items on the land to which archaeologists often apply the very general term “feature.” We usually need additional information to establish how a feature functioned in the past. Some of these special settings are related to sacred activities, and some are part of basic subsistence technology—the tools by which people produced or processed foods and materials. Some examples include:

- » **Shrines** are documented historically and presently among Southwestern tribes. Subtle stone features or stone cairns might mark shrine locations. Information from descendant tribal members is another important means for identifying shrines.
- » **Granaries** in which people stored corn are a relatively common feature. People built these of wood, stone, and mud mortar, often in difficult-to-access locations along canyon ledges.
- » **Agricultural** features such as check dams and terraces have been noted in multiple studies, especially in higher elevation areas within Bears Ears National Monument. They show the labor investment people made to practice agriculture.
- » **Pottery kilns**, sometimes with dense scatters of broken pieces of pottery (sherds), are known from many locations within Bears Ears National Monument. Potters produced vessels for local use and for exchange with neighboring groups. This was an essential economic activity.

BURIALS AND CEMETERIES

Human burials were often placed within or near the place where people were living. Because of the protected residential settings found in many canyons, burial offerings of perishable material (such as hides, fur, feathers, or baskets and other textiles) were often still preserved after the passage of centuries—and even millennia. These human burials have been the targets of extensive vandalism and desecration, which unfortunately continues today. These places are of particular concern to descendant Native Americans, and their protection is a high priority.

In general, professional archaeologists no longer excavate burials or cemeteries for research purposes. Excavation of burials is undertaken when a construction project or other land modification would otherwise disturb the burial.

ROADS AND TRAILS

Bears Ears National Monument is at the northwestern margin of the so-called “Chaco World” (page 29), and archaeologists have recently documented an extensive network of Chacoan roads in southeastern Utah. These remarkably well-preserved roads are particularly vulnerable to development or surface disturbances. Trails are more subtle, and surely much more extensive, than Chacoan roads. Mobility was a critical element of how people survived in this region in the past. Trails across open landscapes are difficult to observe, but in places of steep elevation change, people established well-used trails. Petroglyphs often mark where trails accessed Cedar Mesa’s southern edge, for example. And in many other locations, the hand- and toe-holds people pecked into steep sandstone faces are still visible today as evidence of difficult and dangerous “construction work” in the past.



Aerial view of an ancient Chaco-era road across Tank Mesa north of the San Juan River near Bluff, Utah. This view is southeast at sunrise. PHOTO: © ADRIEL HEISEY

Past Population “Intensity” within Bears Ears National Monument through Time

Even contemporary census counts in the United States, where we have been undertaking a national census on a regular basis since 1790, are fraught with difficulties. Those challenges pale in comparison to what archaeologists confront in “counting” people who lived more than a half-millennium ago. Still, understanding where people lived and how many people were in a region provides significant insights into the issues that they may have faced to feed their families, maintain social relationships, and meet the requirements of their religious systems.

Our gathering of experts did not have access to current site inventories for the Bears Ears region. As a result, we approached the topic of past population in a simplified manner. We asked participants: what was the “relative population intensity” in different portions of Bears Ears National Monument during the time span from about 500 BC to AD 1300? We then drew areas of very low, low, medium, and high population intensity on a basemap projected on a screen visible to all participants. Objections or suggested modifications to boundary lines and levels of

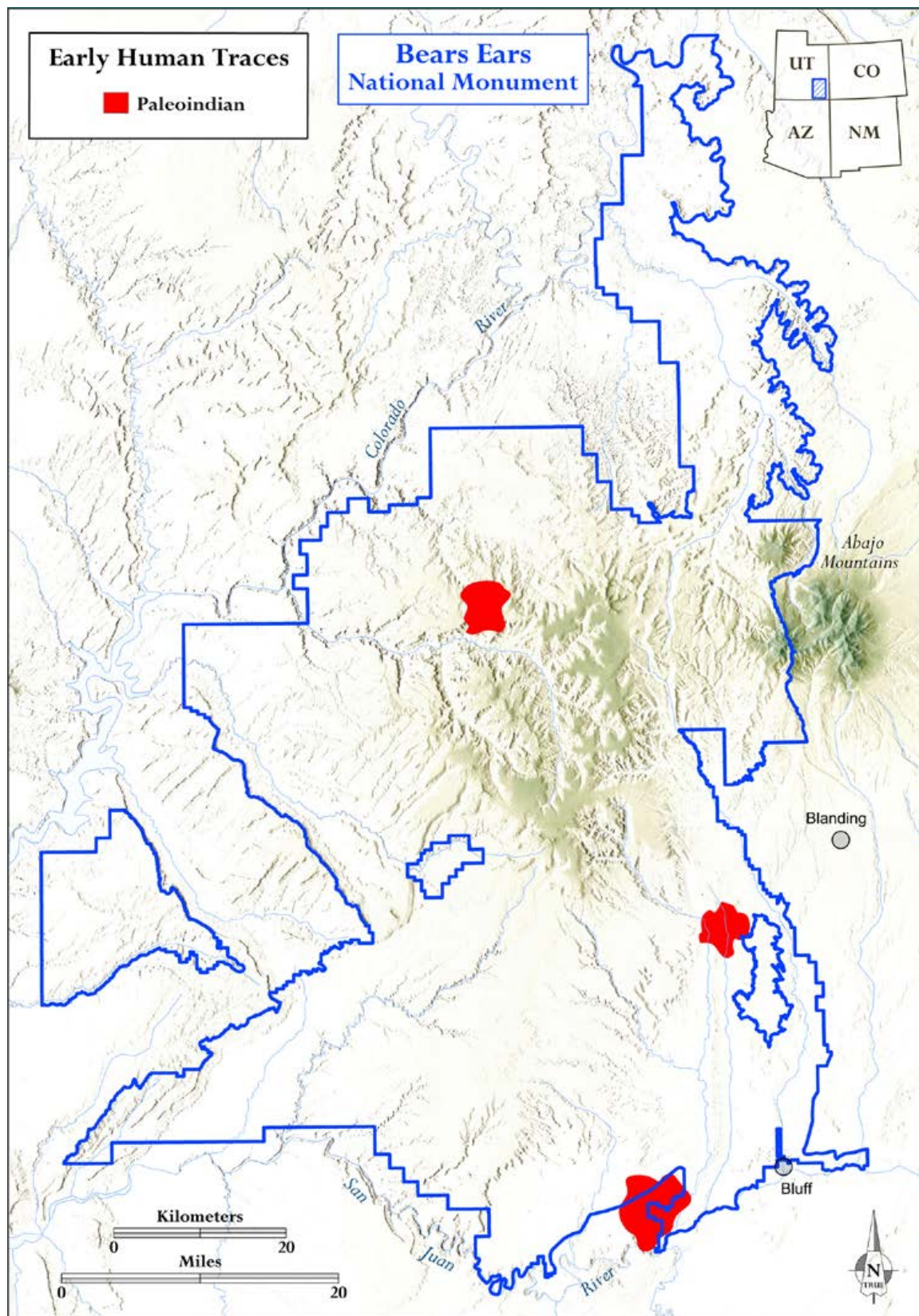
intensity were discussed as a group. The result was a working consensus of population distribution based on the experts’ diverse on-the-ground knowledge. These models will continue to be refined.

The ten maps that follow highlight just how dynamic this landscape was over the course of more than a dozen millennia. Some time periods are significantly underrepresented—especially the very early Paleoindian and Archaic times. This is because very little research has been directed

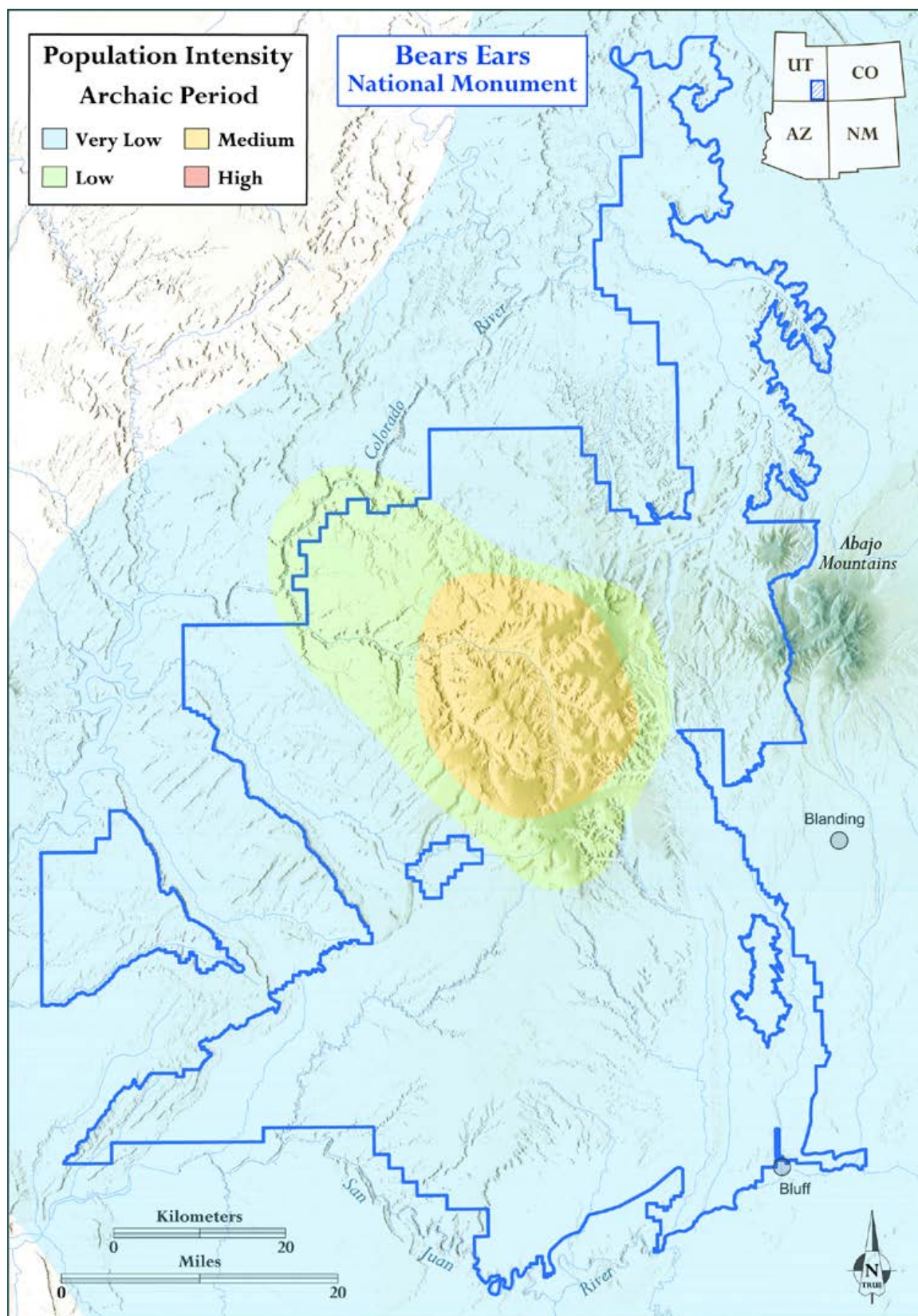
We asked participants:

What was the “relative population intensity” in different portions of Bears Ears National Monument during the time span from about 500 BC to AD 1290?

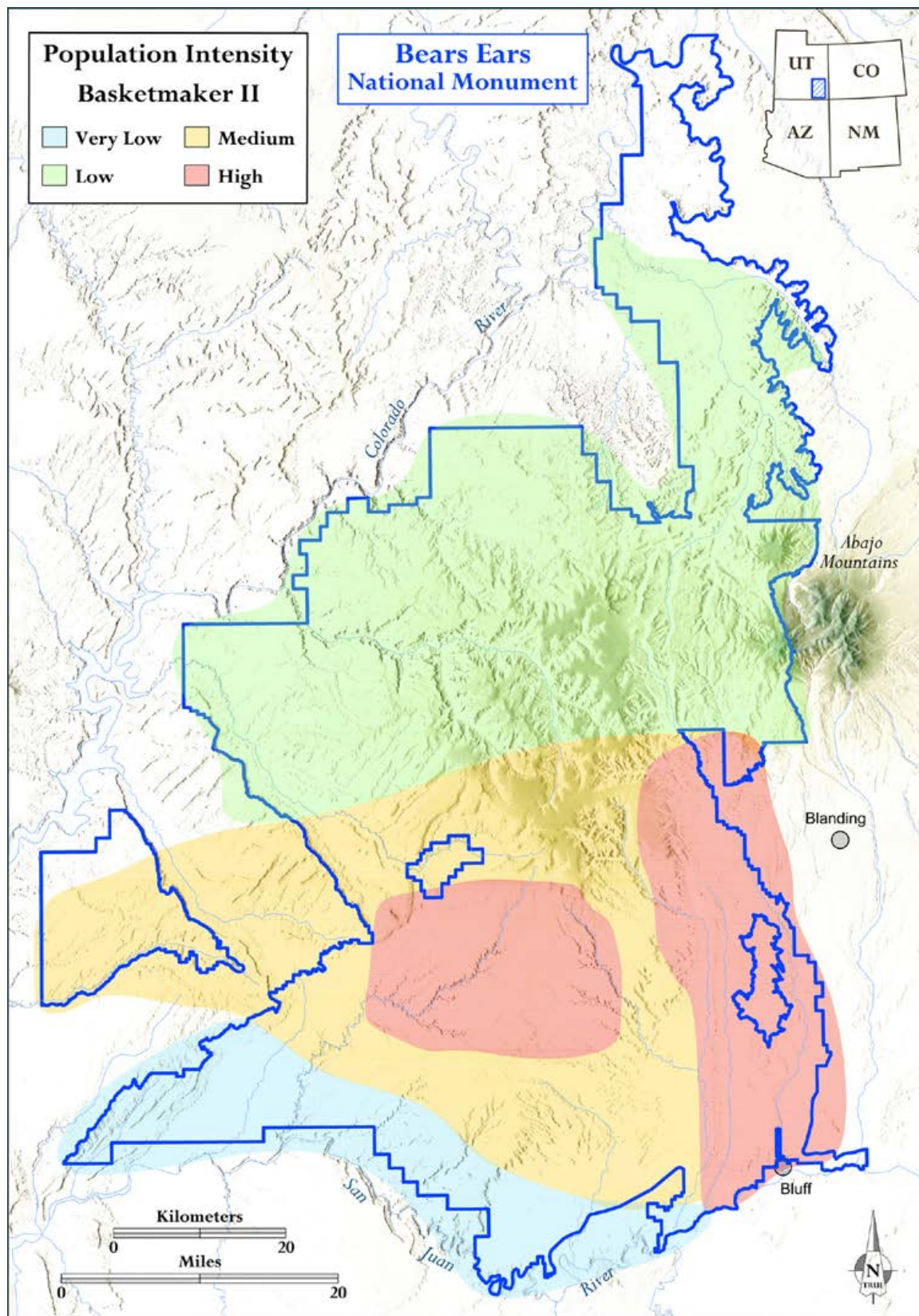
specifically to those ancient time periods, and because the geological conditions of different portions of Bears Ears National Monument make these time periods either more or less visible on the modern land surface. It is not until around 500 BC that the intensity of archaeological research and the visibility of archaeological materials become amenable for expert assessments of population intensity.



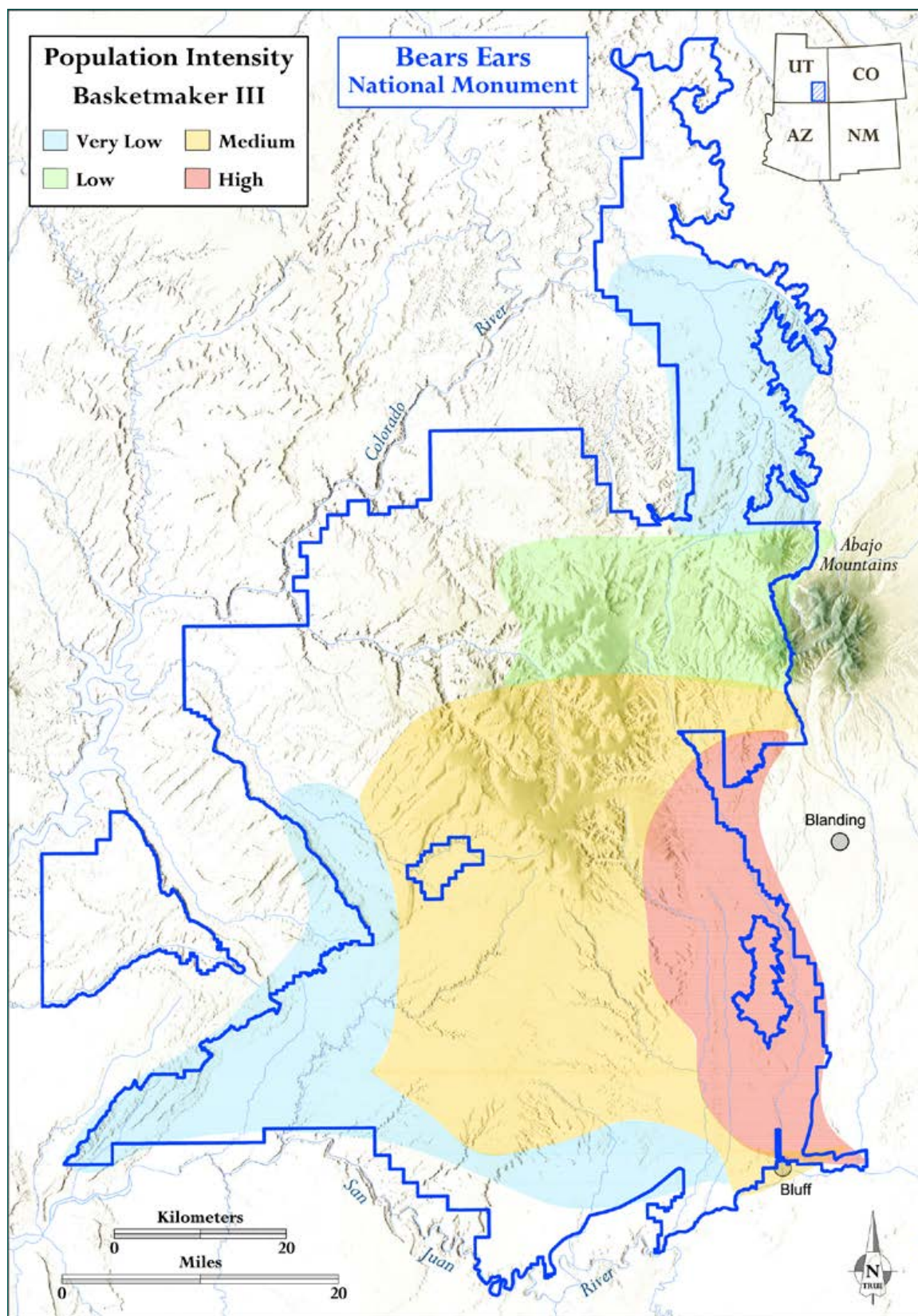
Paleoindian (11,000–6,000 BC)—Archaeologists have documented a Paleoindian Clovis point (see page 12) and associated evidence of stone tool manufacture near the San Juan River. We also know of another isolated Clovis point and a slightly later isolated Folsom point.



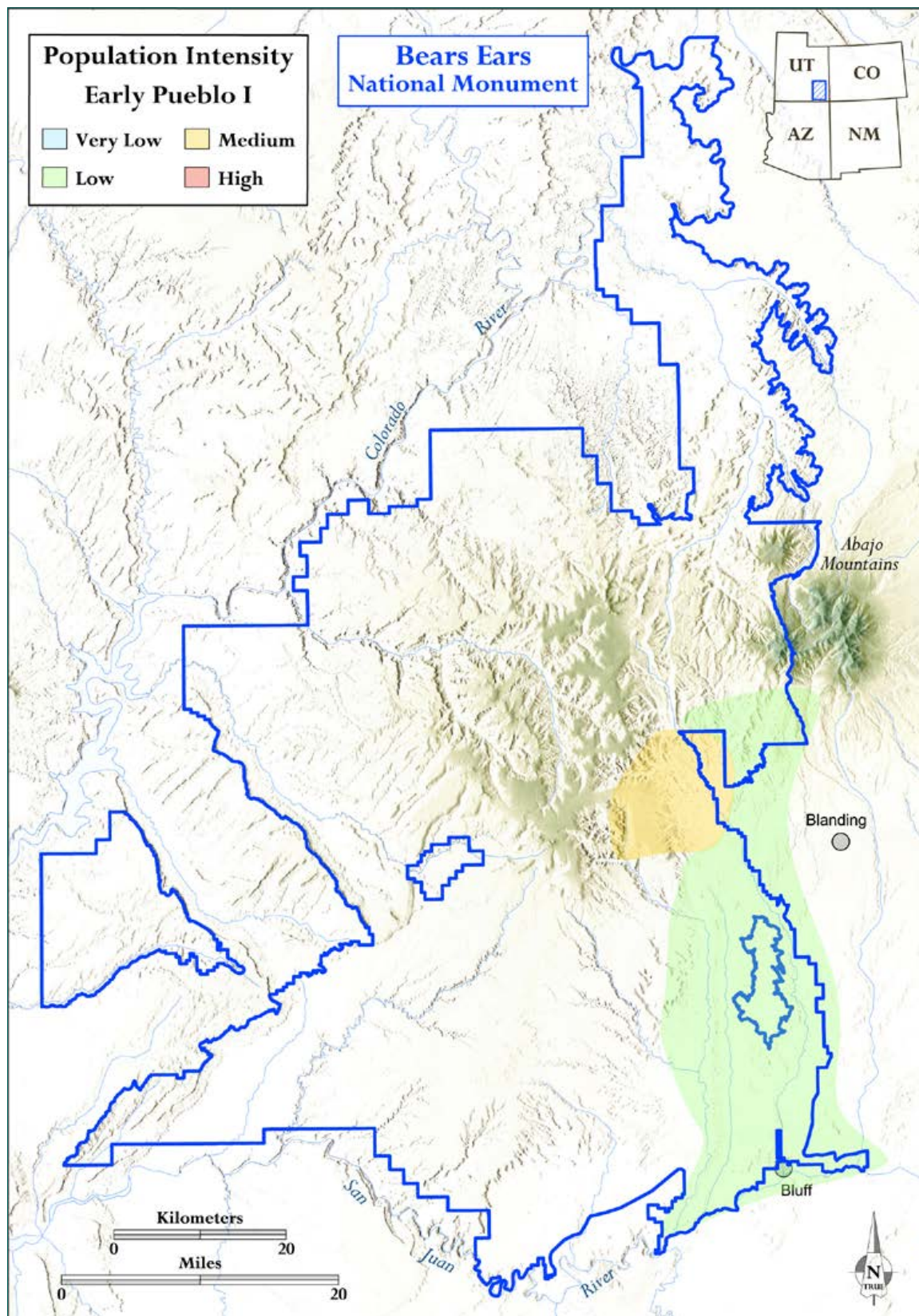
Archaic (6000–2000 BC)—Experts consistently noted that single or often multiple Archaic dart points are known from nearly all portions of Bears Ears National Monument and in immediately surrounding areas. They reported concentrations of Archaic sites in upland areas.



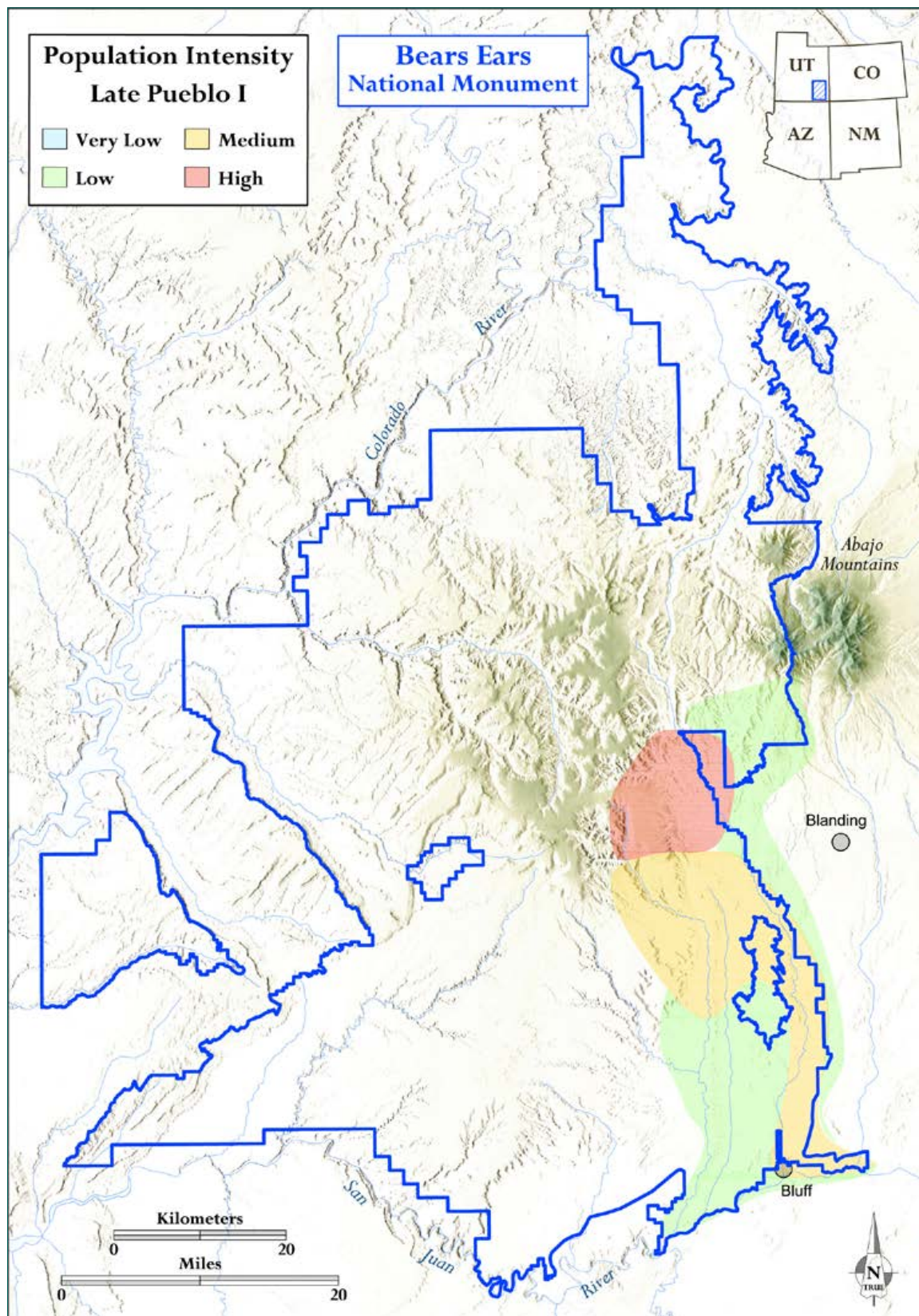
Basketmaker II (500 BC–AD 500)—Early farmers, who were not yet making pottery, were making intensive use of Cedar Mesa, Comb Ridge, and the Cottonwood Wash area north of Bluff.



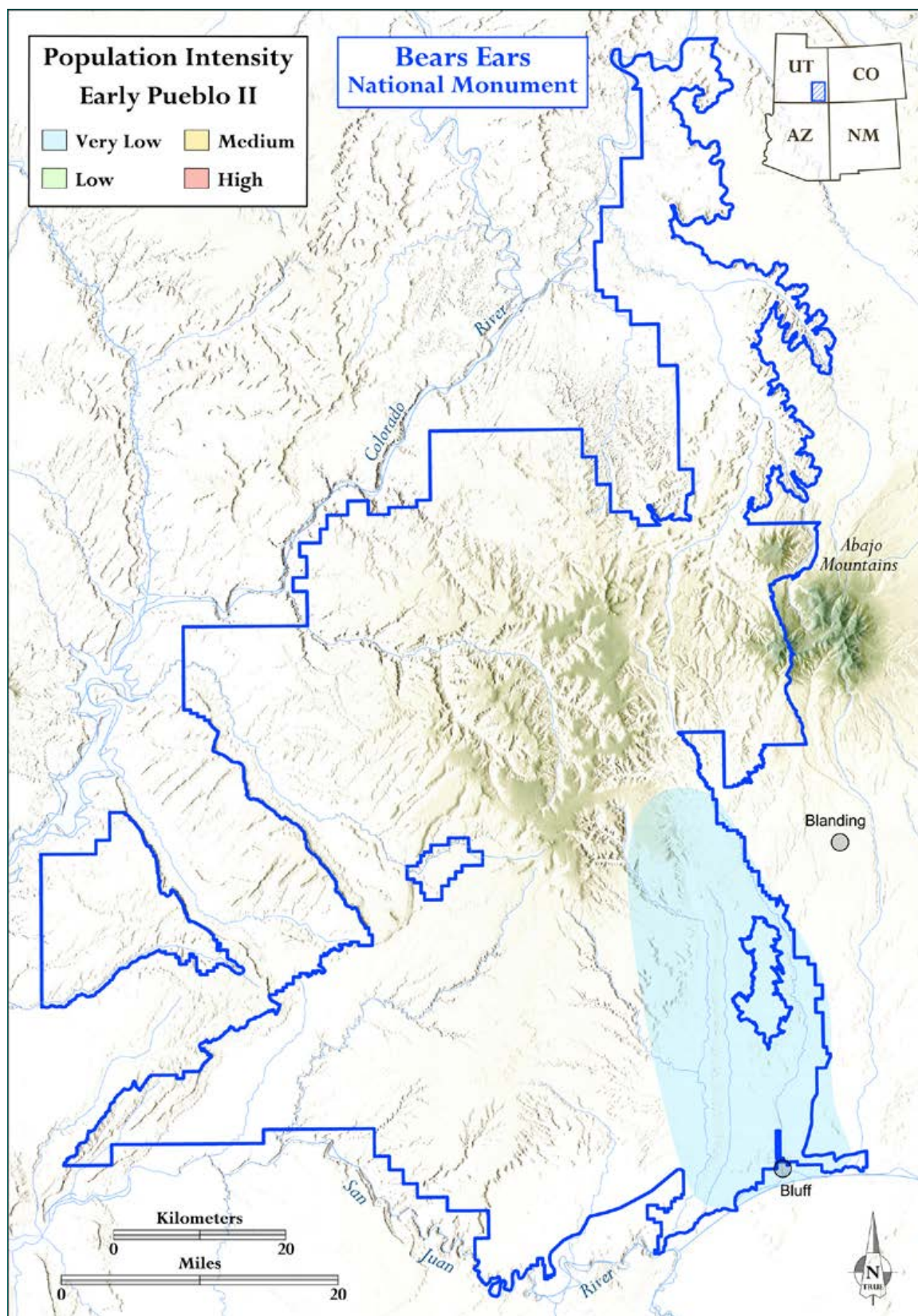
Basketmaker III (AD 500–750)—Intensity dropped somewhat on Cedar Mesa, but continued north of Bluff. There was a general eastward shift in population throughout Bears Ears National Monument.



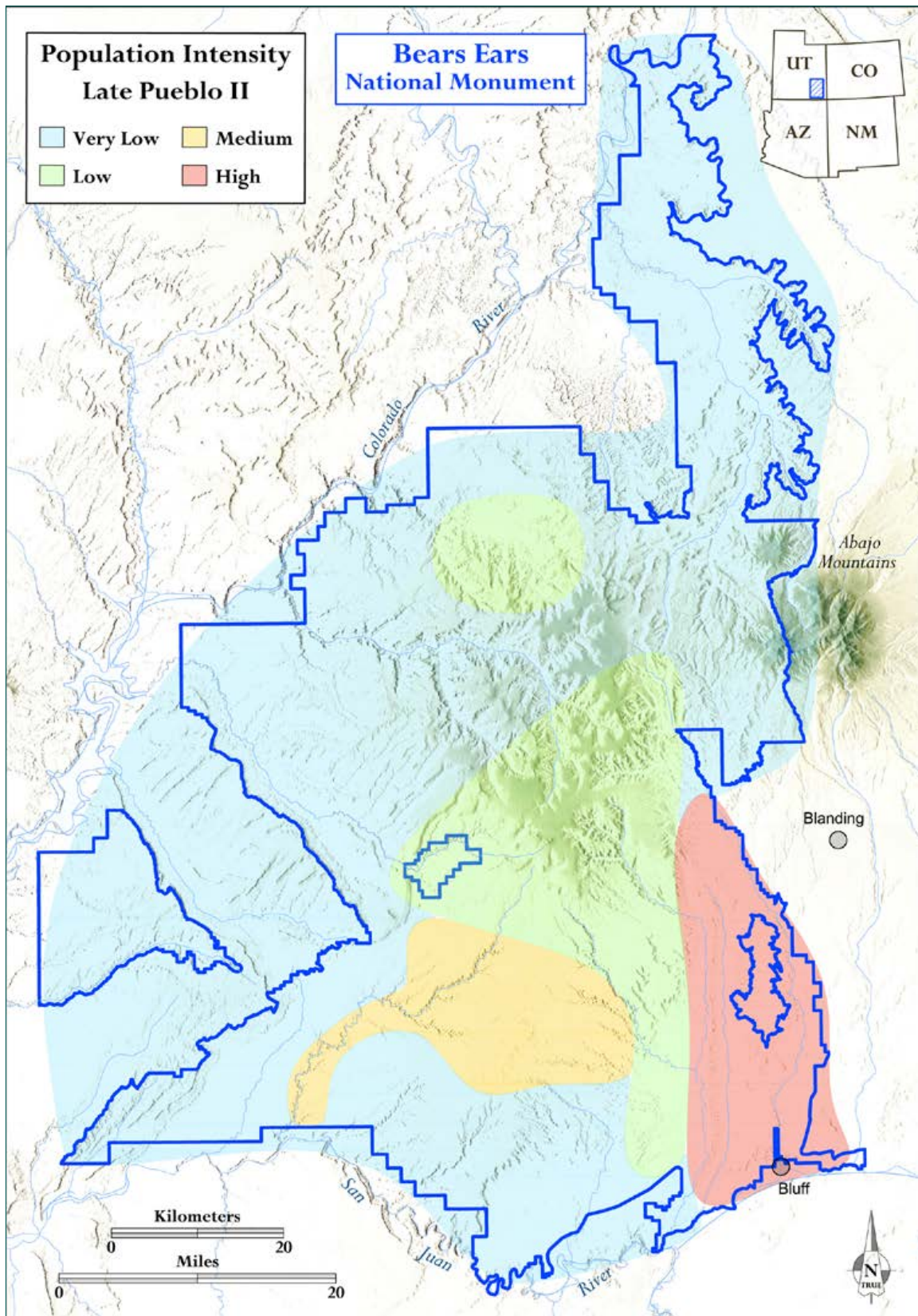
Early Pueblo I (AD 750–825)—There were not many people living in Bears Ears National Monument over these generations. The Mesa Verde area to the east was probably attracting people.



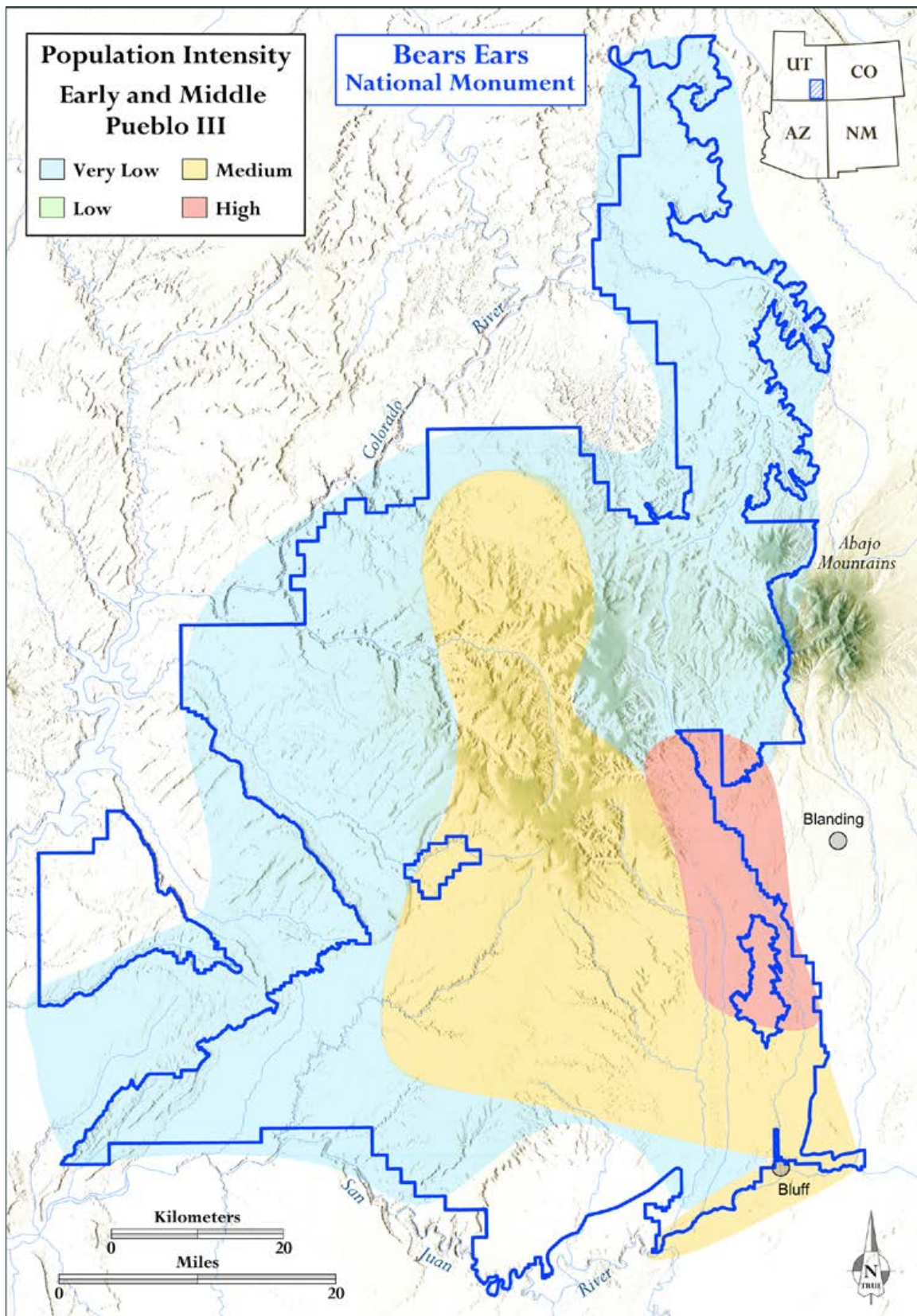
Late Pueblo I (AD 825–900)—Trends from Early Pueblo I continued, with a concentration of population at higher elevations in upper Cottonwood Wash.



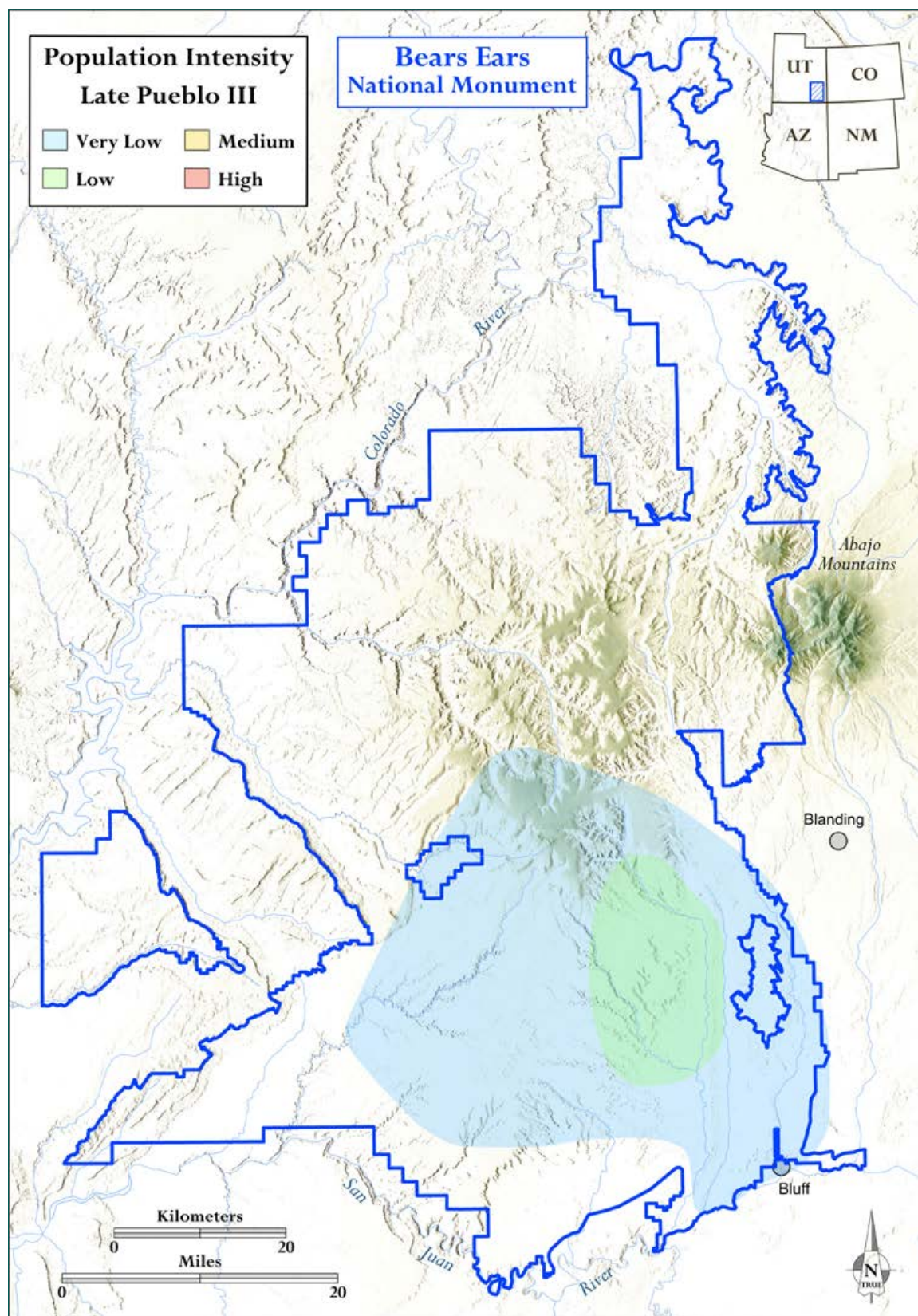
Early Pueblo II (AD 900–1000)—Again, there were not many people residing in Bears Ears National Monument. Residence was most concentrated in the Comb Ridge and Cottonwood Wash areas north of Bluff.



Late Pueblo II (AD 1000–1150)—There was a new florescence over much of Bears Ears National Monument. Residential focus was still in the Bluff-to-Blanding zone, but there was renewed activity on Cedar Mesa and in higher elevation areas to the north. There was evidence of in-migration from the Mesa Verde area to the east and from Kayenta regions south of the San Juan River.



Early and Middle Pueblo III (AD 1150–1250)—There was residential activity over most of Bears Ears National Monument. The highest intensity along Cottonwood Wash and Comb Ridge shifted slightly north, and there was population growth on Cedar Mesa all the way north to Beef Basin. Population declined toward the end of this time period. Mesa Verde expansion into the Monument area continued, especially in the early 1200s.



Late Pueblo III (AD 1250–1290)—Population declined even more rapidly. The final residents of the area often inhabited defensible settings beneath the rims of major canyons. Depopulation was complete by 1290.

Regional Relationships beyond Bears Ears National Monument through Time

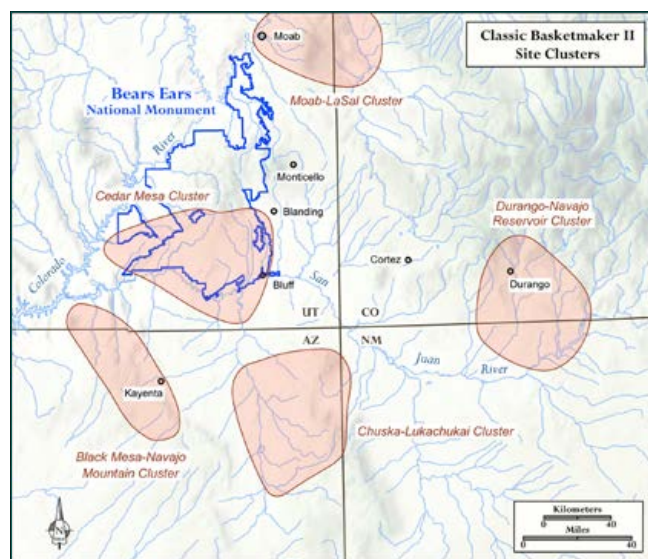
Now, we focus on larger-scale relationships between residents of Bears Ears National Monument and surrounding populations. The large number of external relationships underscores that Bears Ears National Monument represents a medium-scale cultural landscape nested within a much larger, dynamic, grand-scale cultural landscape.

BASKETMAKER II POPULATION CLUSTERS

Previous research has shown that this time interval is particularly well-represented in the archaeological

record of the Four Corners area. This map shows the locations of five

population clusters researchers have thus far defined. This was an era of intensifying agriculture, increasing population, and reduced residential mobility (living in one place for longer periods of the year). This was an initial stage in the development of village life in this region. The nature of the relationships between these five documented population clusters offers great potential for future insights into this important human transition as well as general and particular processes of change.



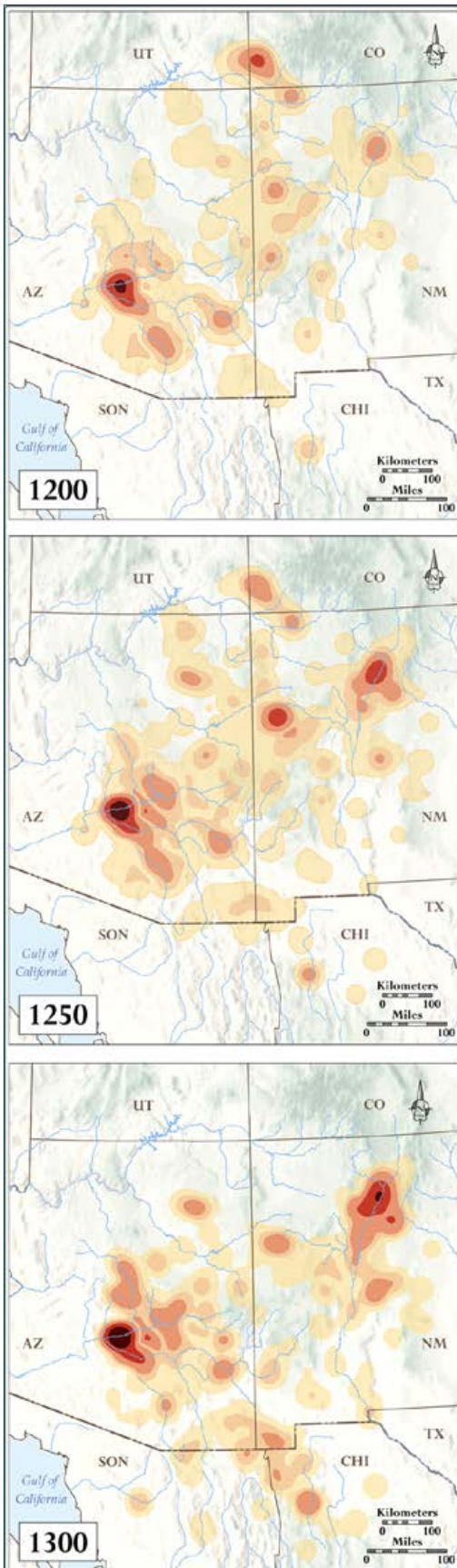
Populations of Basketmaker II farmers clustered in areas with good growing conditions.



Populations from south of the San Juan River moved into the Bears Ears region in the 1000s and early 1100s.

KAYENTA EXPANSION FROM SOUTH OF THE SAN JUAN INTO BEARS EARS NATIONAL MONUMENT DURING LATE PUEBLO II

Distinctive pottery and square kivas are markers of Kayenta groups that expanded northward into Bears Ears National Monument in Late Pueblo II times. This illustrates another period of population movement and social changes. It was also the prelude to the ultimate depopulation of this region by Ancestral Pueblo groups.



PUEBLO III TOWERS ACROSS THE NORTHERN SOUTHWEST

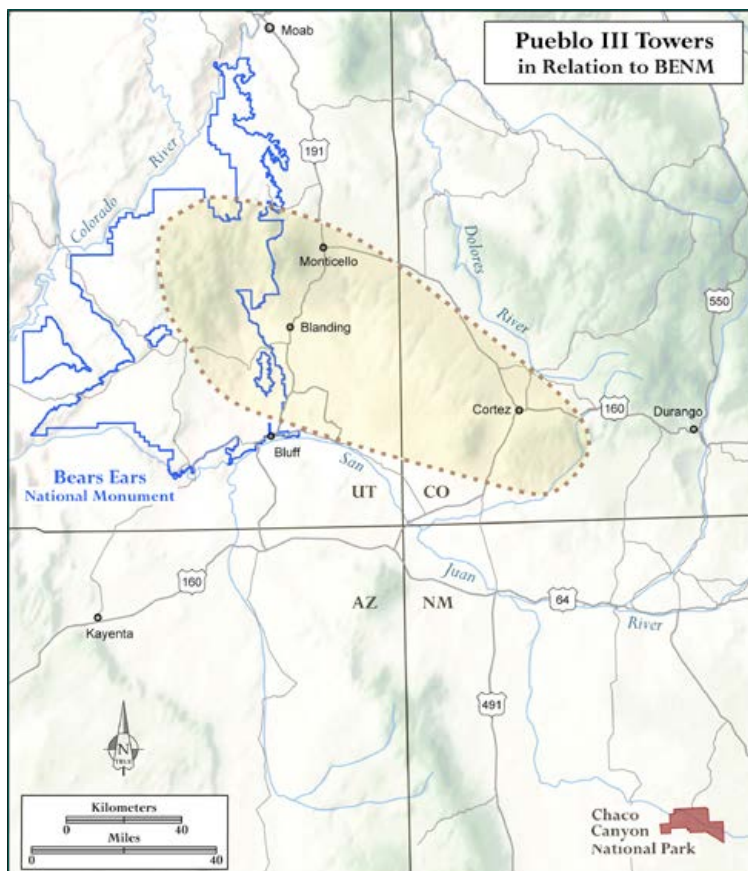
Current research suggests that tower structures started to be constructed in and around the Mesa Verde area during late Pueblo II times. They increased in numbers and expanded westward during Pueblo III times. A recent study highlighted the ideological role these towers may have had in ancient Pueblo identity.

REGIONAL DEPOPULATION IN LATE PUEBLO III TIMES

After some 1,300 years of dynamic, but apparently continuous, residence in the Four Corners region, there was a substantial depopulation of this area in the final 50 years of the 1200s. This map series shows the abrupt change in population that occurred over the course of the 1200s. In addition, research indicates that

Left: Why did people leave the Four Corners region? Research in Bears Ears National Monument will help answer that question.

Below: Tower-building expanded west from the Mesa Verde area in the early 1200s.



Connecting across the Landscape

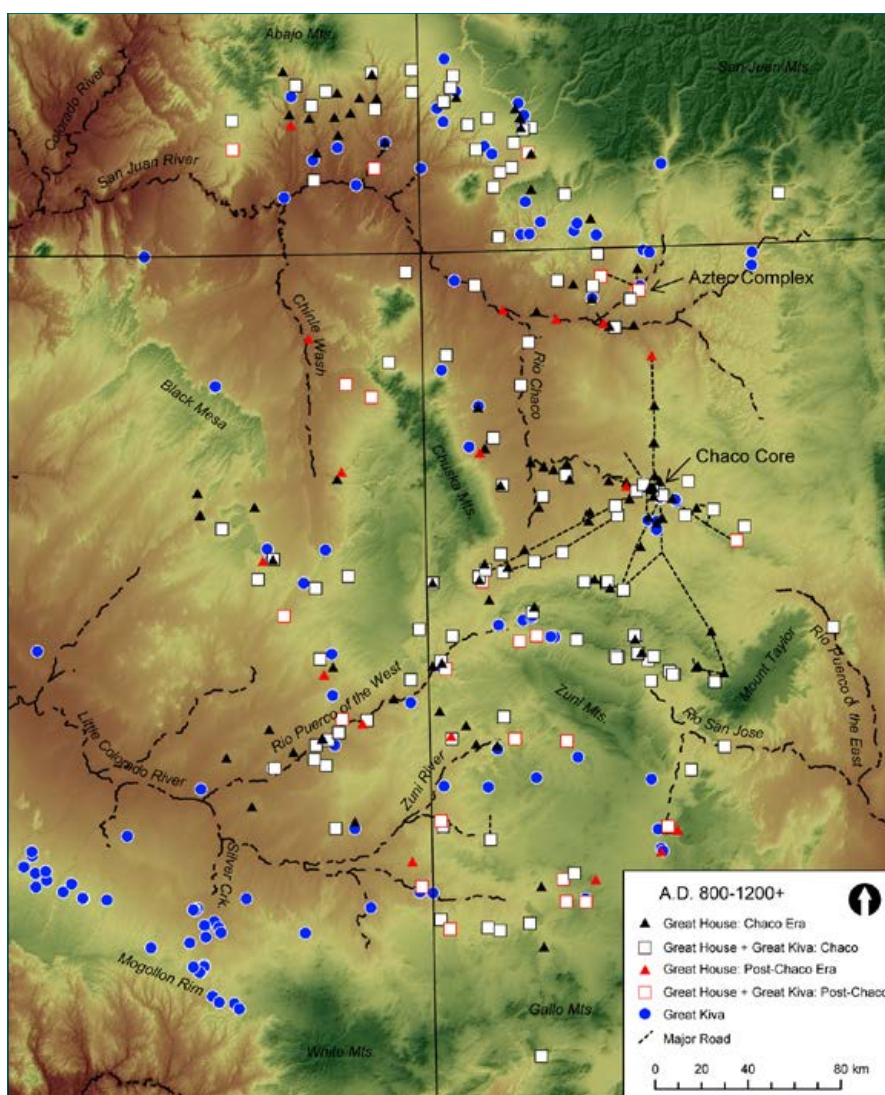
To ensure survival, people need to connect and collaborate with others. A common ideology and shared identity tend to be important ways for human groups to “get along.” Tracing the development of shared and sometimes conflicting identities over the Bears Ears National Monument landscape and beyond will be an important focus of future research.

Economic ties and exchanges of goods often surmount differences in ideology or identity. There are multiple examples of areas within Bears Ears National Monument receiving inflows of new residents from adjacent areas—sometimes “connections” were made because new arrivals colonized formerly empty areas, and other times newcomers would have encountered others already in residence. Interaction, exchange, and population movement were important sources of cultural change over time in the Bears Ears National Monument region.

the movements of Kayenta groups and Mesa Verde populations out of the northern Southwest were dramatically different, in terms of the archaeological evidence they left.

THE CHACO WORLD IN SOUTHEASTERN UTAH

The dramatic cultural developments that were focused on Chaco Canyon in northwest New Mexico from about AD 800 until after AD 1200 extended north of the San Juan River into southern Colorado and southeastern Utah. Circular great kivas, great house architecture, and a remarkable system of roads define an extremely large area that is often referred to as the Chaco World. In southeastern Utah multiple road segments have been documented. They occur



The Chaco World as defined by the distribution of great kivas and great houses. The “Chaco Core” on this map is the location of Chaco Culture National Historical Park.

COURTESY OF MATT PEEPLES, CHACO SOCIAL NETWORKS PROJECT

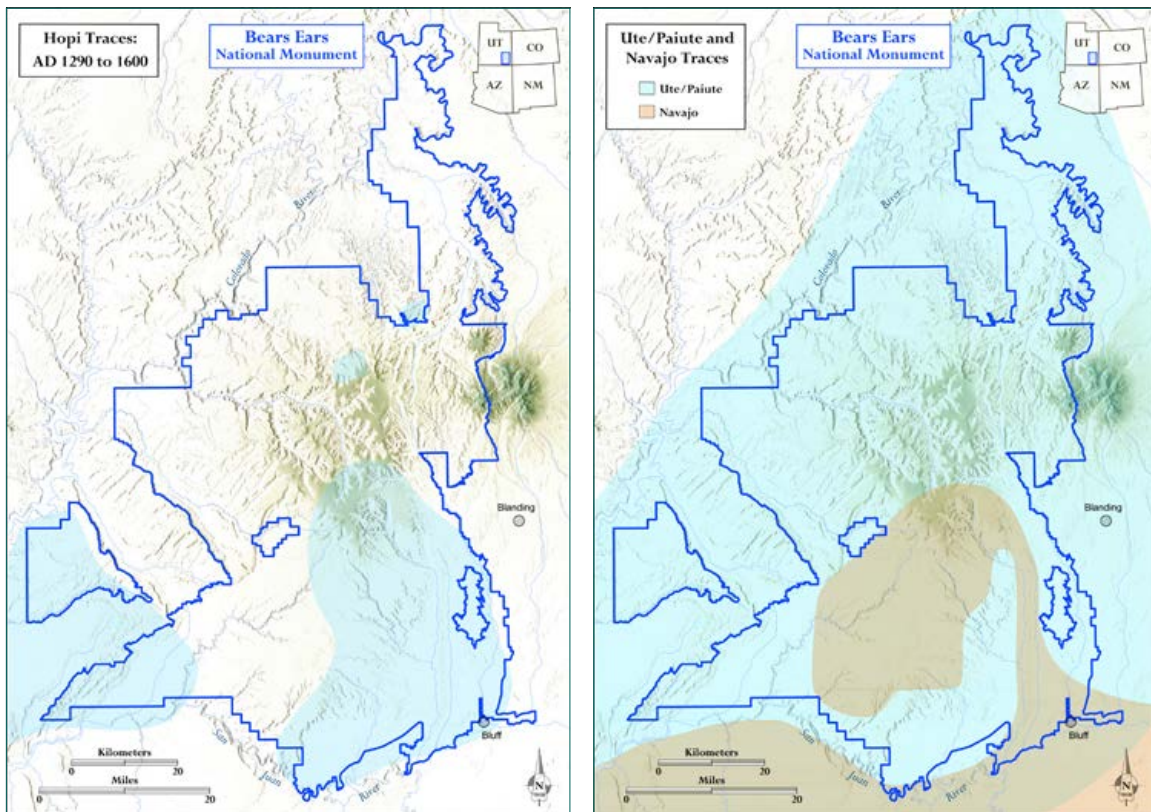
in relationship to great houses, some with great kivas. Distinctive u-shaped surface features called “herraduras” are also found associated with Chacoan roads in southeastern Utah. Excellent preservation due to lack of surface disturbance makes the Chacoan roads of southeastern Utah a particularly important, and ultimately fragile, resource.

ANCESTRAL PUEBLO PRESENCE IN BEARS EARS NATIONAL MONUMENT AFTER AD 1290

Sometimes even single artifacts carry a great deal of information (page 12). Archaeologists have noted an interesting pattern in the distribution of Hopi yellow ware pottery in small quantities in southeastern Utah during Pueblo IV (AD 1290–1500) times. Apparent Hopi shrines have also been noted in the area. Hopi people may have traversed this region during Pueblo IV times on expeditions to obtain salt, as suggested by a unique cache of materials found outside Bears Ears National Monument.

UTE/PAIUTE AND NAVAJO EARLY TRACES

Ute and Paiute groups are part of a broader Numic expansion of Uto-Aztecan speakers across and beyond the Great Basin that is still poorly understood. Documenting the archaeology of the arrival and subsequent use of Bears Ears National Monument by Ute and Paiute groups is a high priority.



Upper left: Archaeologists have documented Hopi pottery and shrines dating after the depopulation of the late 1200s. **Upper right:** We have much to learn about Ute/Paiute and Navajo expansion into the Bears Ears region.

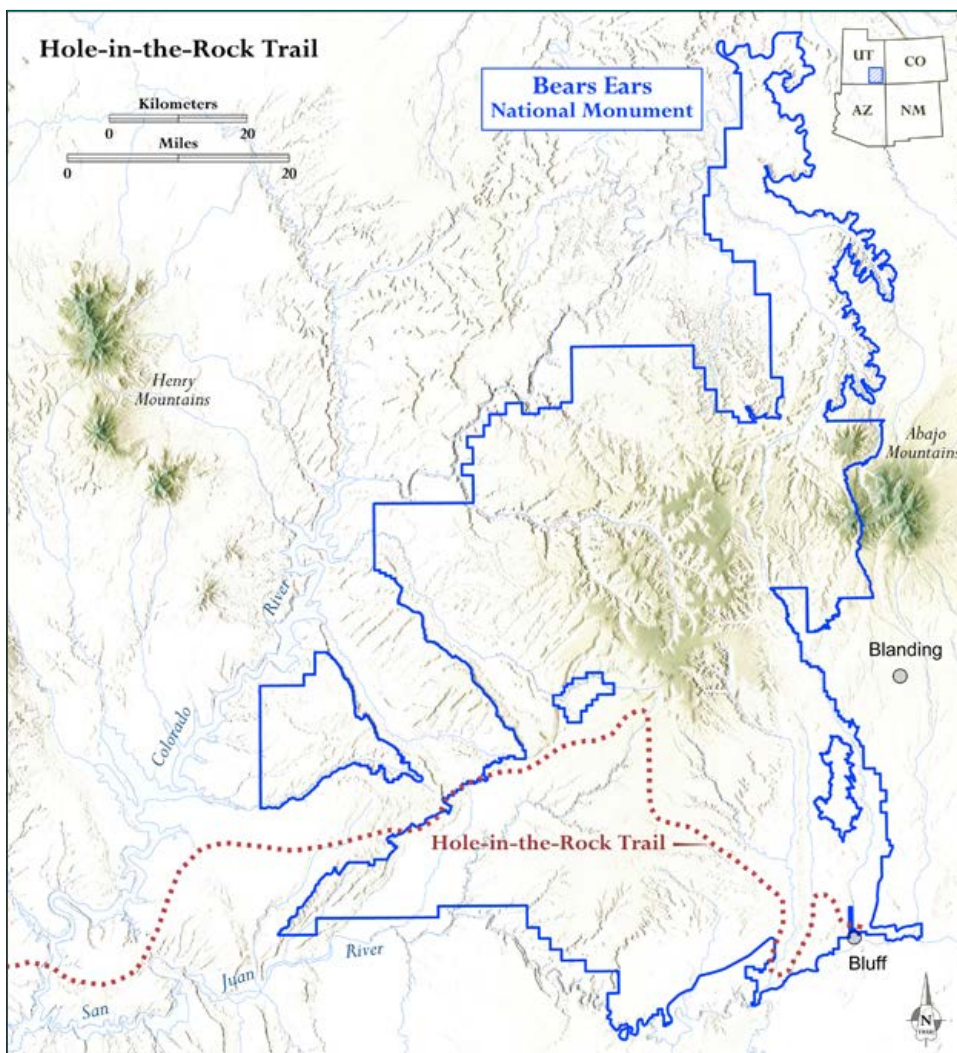
Similarly, documentation of Navajo populations' movements into Bears Ears National Monument after 1500 is also a high research priority.



MORMON MOVEMENT INTO BEARS EARS NATIONAL MONUMENT

The movement of Mormon settlers into southeastern Utah began in autumn 1879 with a party of 230 pioneers. Their harrowing journey involved descent through a narrow rock passage to cross the Colorado River, followed by a difficult trek into what is now Bears Ears National Monument to get around Grand Gulch, and another difficult passage through Comb Ridge. They

determined to halt their journey and established a settlement at Bluff in April 1880. Note the broad swath through the Bears Ears National Monument area shown in the map at left, which is the broad swath of the National Register designation of the trail followed by these Hole-in-the-Rock pioneers.



Top left: Nineteenth-century Navajo male hogan, Butler Wash, in 2009. In 2012, campers kicked down this structure and used it for firewood. PHOTO: WINSTON B. HURST **Bottom left:** The Hole-in-the Rock Trail crosses a portion of Bears Ears National Monument.

Tracing Ideologies and Past Identities through Rock Art Styles and Their Distributions

*In his 2010 book, *Traces of Fremont*, author and archaeologist Steven Simms wrote: “The symbols and figures in Fremont rock art are part of an ideological fabric stretched across a sacred landscape.” This eloquent statement provides a useful framework for thinking about the striking and abundant rock art of the Bears Ears National Monument.*

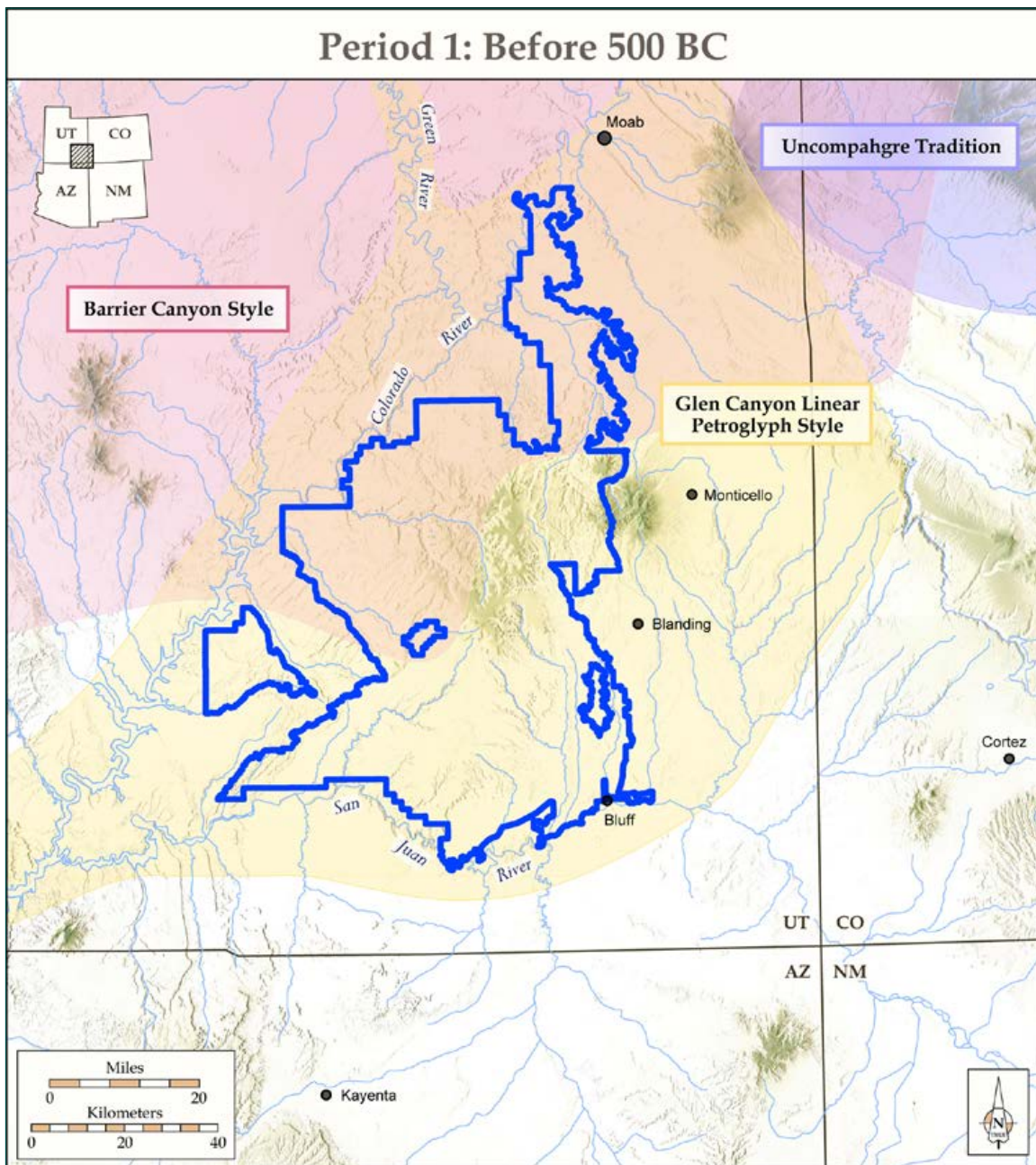
Archaeologists who have spent substantial effort in recording and analyzing the spatial distribution, stylistic patterns, and broad time sequences of major rock art styles across the northern Southwest have outlined a basic framework for classifying the rock art of the greater Bears Ears region. This information is displayed on four maps (pages 33–39) as broad spatial distributions. What is most striking is that multiple styles tend to come together in and around Bears Ears National Monument. It is the landscape-scale spatial distribution of these styles that is most important, however—not the classification of single images.

Archaeologists have invested much less effort in the study of rock art than they have in other aspects of the archaeological record. There is, however, a welcome trend toward fully integrating rock art as a critical information source in archaeological research. This means focusing on the environmental setting of rock art sites, carefully documenting the distribution of artifacts and architecture associated with the site, developing ways to carefully document chronological patterns within and between rock art sites, and using new theoretical approaches to improve insights into the role of rock art as communication in past social networks and religious practices.

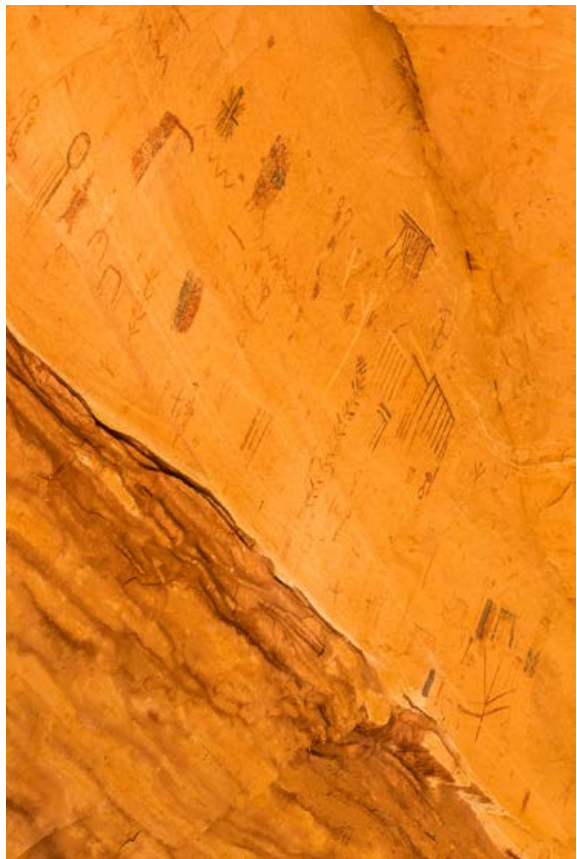
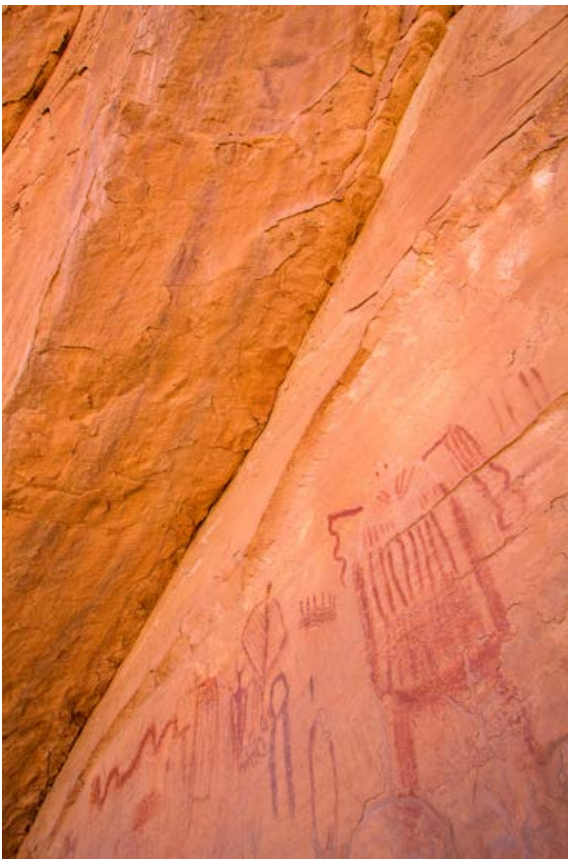
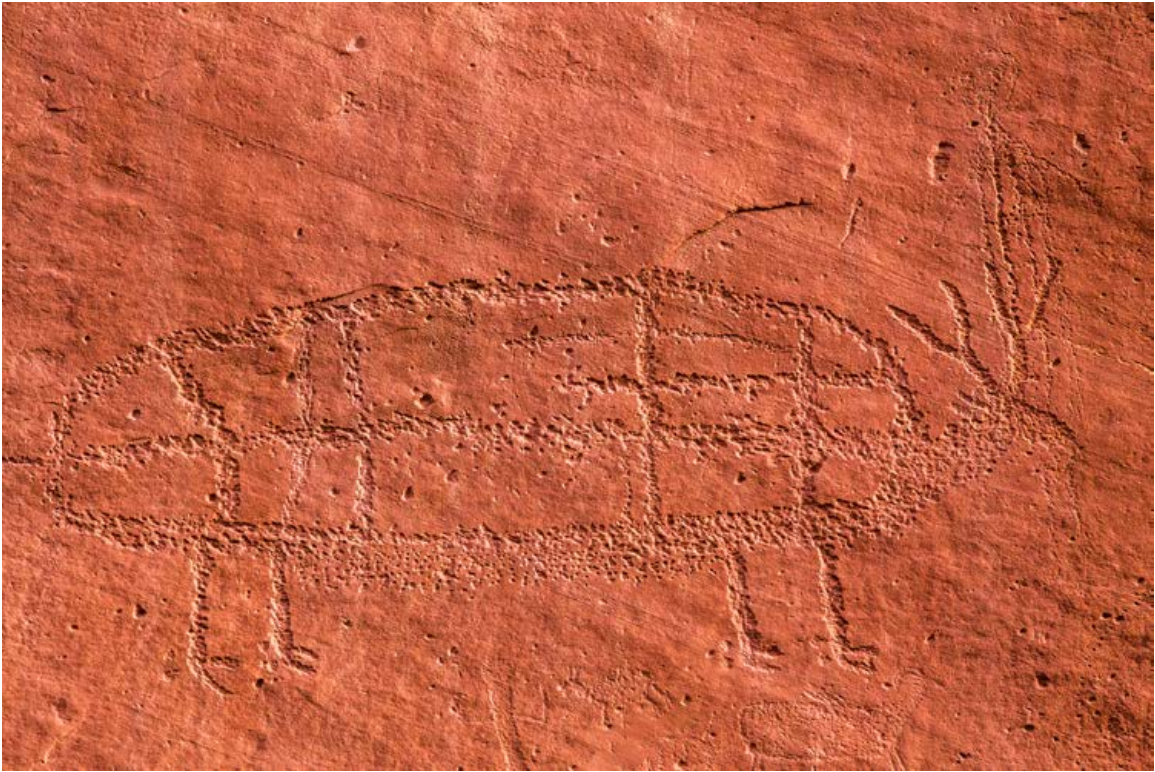
The rock art styles that archaeologists have defined may be placed in four broad temporal groups: Period 1: Before 500 BC, Period 2: 500 BC to AD 750, Period 3: AD 750 to 1500, Period 4: Post AD 1500.

San Juan Anthropomorphic Style. PHOTO: R. E. BURRILLO

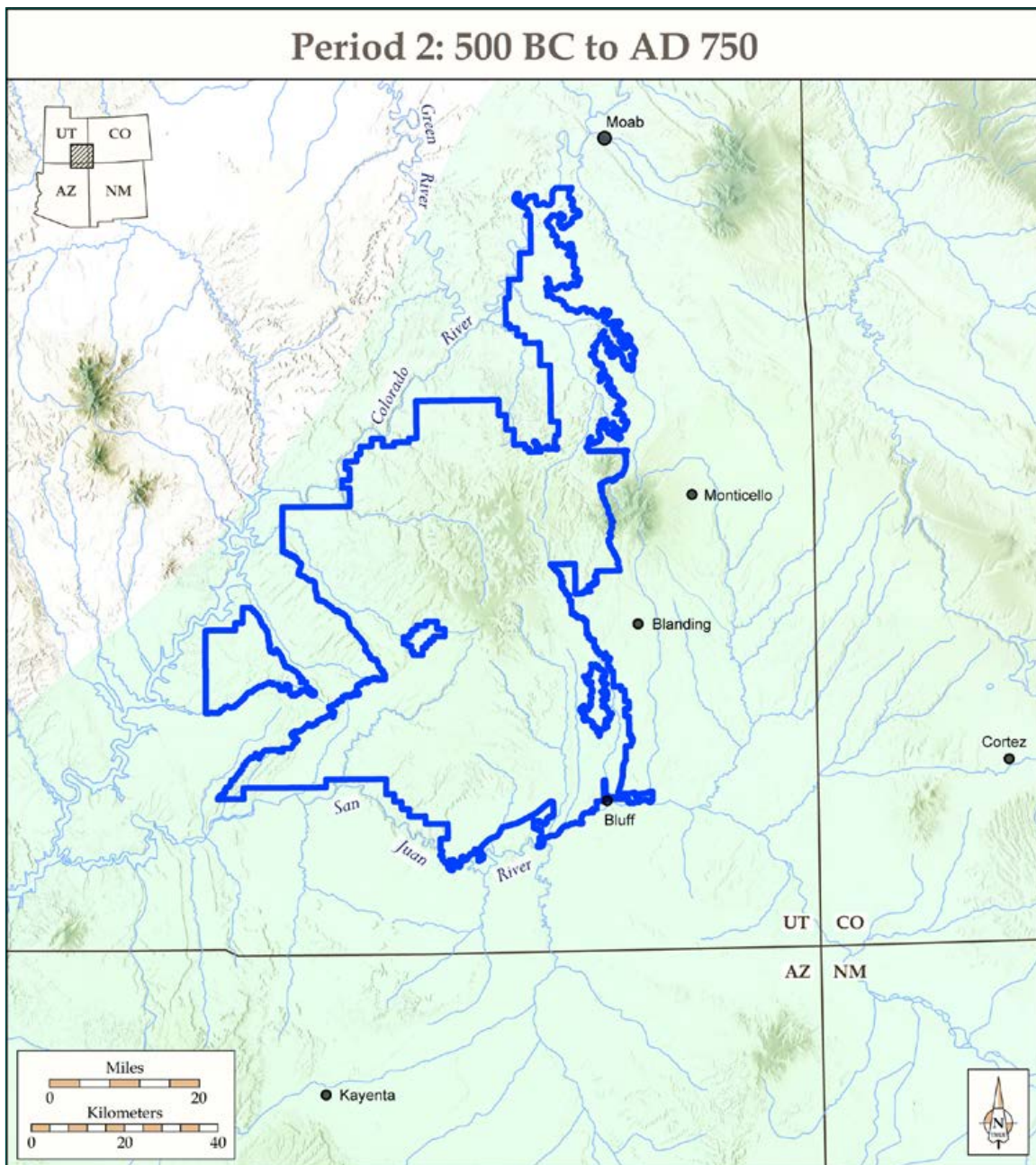




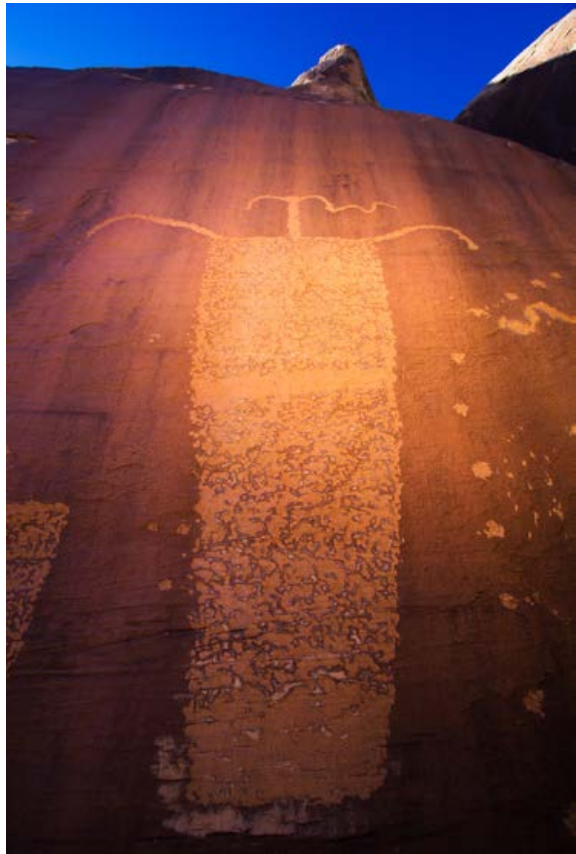
Period 1 rock art falls into the broad Archaic category and dates to 500 BC or earlier. It includes many different traditions; Barrier Canyon Style, Glen Canyon Linear (Style 5), and the Uncompahgre Tradition distributions are shown on the map. Other styles that cover extensive areas, but are rare in Bears Ears National Monument, and therefore are not mapped, include the Abstract Geometric Painting Tradition (Monochrome and Polychrome) and the Abstract Geometric Petroglyph Tradition.



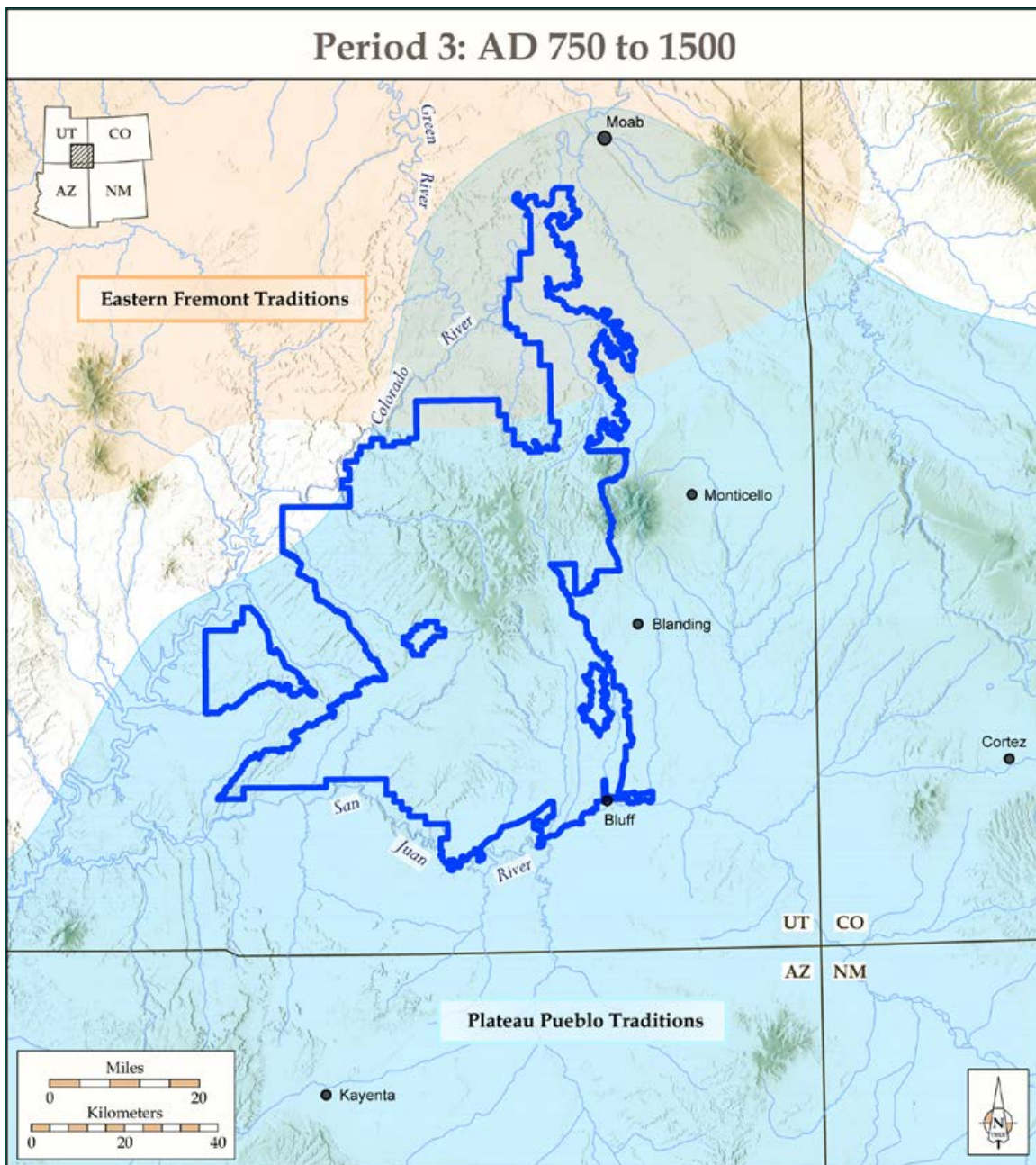
Top: Glen Canyon Linear Style 5. **Bottom left:** Barrier Canyon Style. **Bottom right:** Archaic Polychrome Abstract Style. PHOTOS: JONATHAN BAILEY



Period 2 represents the agricultural Basketmaker Traditions (Western and Eastern San Juan styles; Abajo La Sal style).



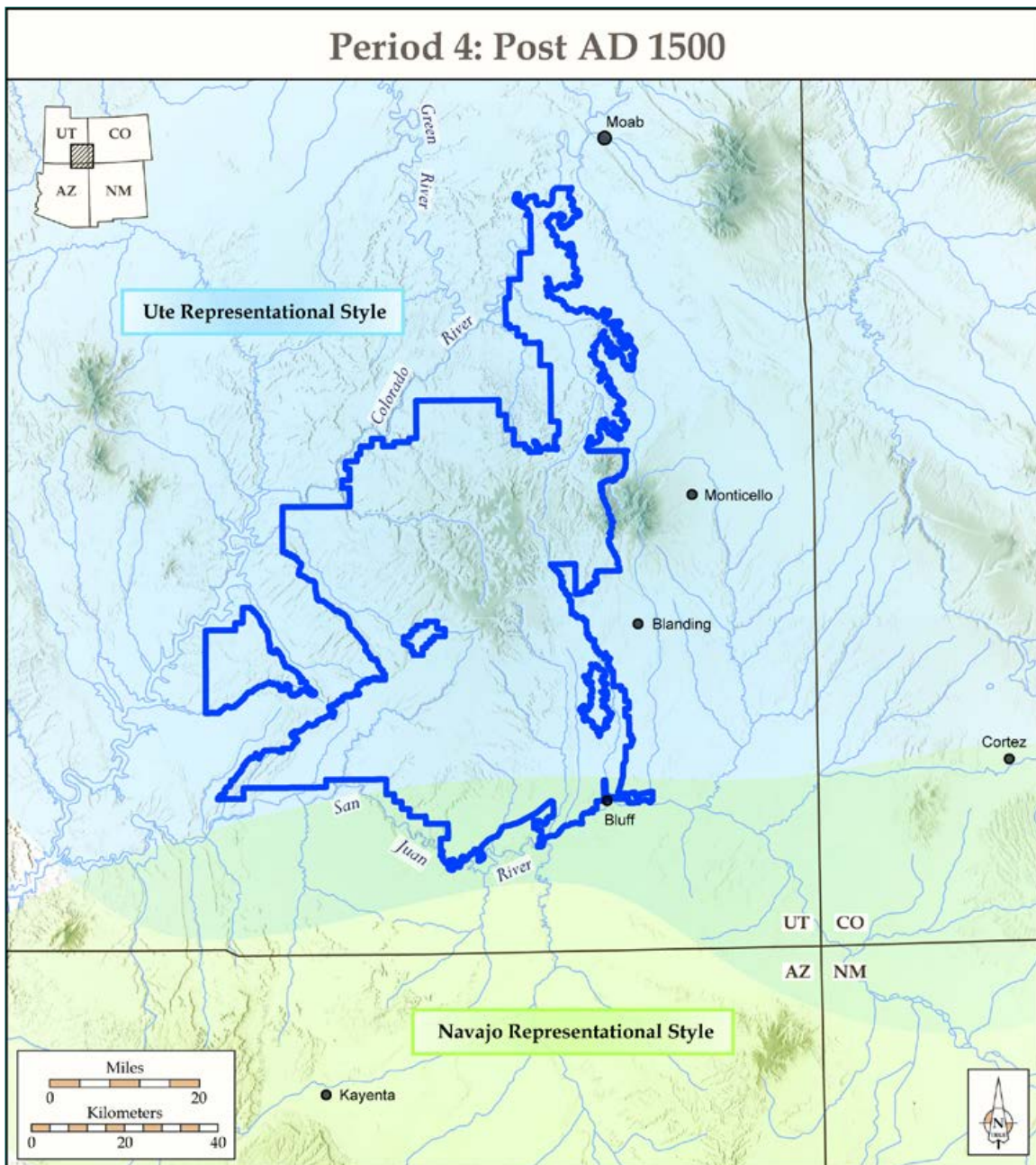
Top: San Juan Anthropomorphic Style. **Bottom left and right:** La Sal Style petroglyphs. PHOTOS: JONATHAN BAILEY



Period 3 reflects agricultural peoples of Bears Ears National Monument, who left a dramatic array of petroglyphs and pictographs across Bears Ears National Monument, including the Eastern Fremont Tradition (Uintah Fremont and Tavaputs-San Rafael Fremont traditions), and Plateau Pueblo Tradition (Late Basketmaker III/Pueblo I, Pueblo II–III, Pueblo III–IV).



Top: Fremont Southern San Rafael Style. **Bottom left and right:** Kayenta Representational Style. PHOTOS: JONATHAN BAILEY



Period 4 rock art is attributed to Paiute or Ute groups and Navajo groups. It dates after 1500 and extends to the mid-1900s. Firm identification of which cultural group created this rock art is often difficult. Horses are a common theme, and similar yet diverse techniques for making the images were used by both groups.



Upper left: Navajo Representational Style.

PHOTO: JONATHAN BAILEY **Upper right:** Navajo Representational Style. PHOTO: WILLIAM H. DOELLE

Right and below: Ute Representational Style.

PHOTOS: WILLIAM H. DOELLE



Future Research Goals

The final session of the assembled experts sought to identify research issues that were important for the future. Several people suggested prioritizing areas where we anticipate impacts from increased visitation to Bears Ears National Monument, and some raised concerns about establishing baseline condition information for such areas. Experts also identified a number of topics that should contribute to better interpretive information for visitors.

REFINE the dating of artifacts, rock art styles, pottery styles, architecture, and other components of the archaeological record in order to better understand periods of stability or change in the past.

CONTINUE intensive sampling of wood in preserved architecture throughout Bears Ears National Monument, as these materials are threatened and the precise chronological information from tree-ring dating is invaluable.

DOCUMENT the source locations of raw materials used to make stone tools. Identify the sources of distinctive types of stone people used to make tools in order to help us determine patterns of mobility, patterns of exchange, and changes in technology.

UPGRADE the archaeological site inventory. This is a high priority and will involve effort in several different settings.

- » Large numbers of archaeological site records and information on past survey locations are not included in Utah's official geospatial database. This is particularly true for older academic studies, but also there is a time lag for getting records from cultural resource management studies into this digital database.
- » Many known archaeological sites have never actually been recorded by archaeologists.
- » Plan and implement sample surveys in order to develop scientifically sound estimates of site populations for various portions of the Monument and as a way to develop predictive models useful in Monument planning and management.
- » Plan and implement surveys to update site-condition information on previously recorded sites in areas most likely to sustain impacts from increased visitation.

EXAMINE cultural change. Because Bears Ears National Monument is located at the edges of multiple major regional cultural traditions, it is an ideal place to study past cultural change.

Many transitions took place quite rapidly in the Bears Ears National Monument region, and these are highly visible in the archaeological record.

PRIORITIZE documenting, dating, and interpreting the many well-preserved structures, popularly termed “cliff dwellings,” in naturally sheltered locations in the Monument’s canyons.

- » Few areas in the Southwest have the variety and degree of preservation exhibited by the cliff dwellings of the Bears Ears.
- » The cliff dwellings are a major focus of public interest and require planning to protect them from the impacts of increased visitation.

APPLY new, increasingly holistic approaches to the study of Bears Ears National Monument’s truly magnificent rock art. Develop a comprehensive, large-scale program of rock art research toward multiple benefits.

- » These are extremely fragile resources, so documentation is the first step in planning for long-term preservation.
- » These resources inspire broad public interest. Even informed, low-impact visitation can result in cumulative damage over time.
- » Interpretation through new, creative research may have broad public benefits.
- » Rock art has substantial potential for collaborative research programs involving tribal experts.

FOCUS ON evidence of Archaic hunter-gatherers throughout Bears Ears National Monument.

- » Experts noted the potential for a predictive model to guide a major research effort to document Archaic period activity.
- » Experts raised a specific question about the Late Archaic presence in Bears Ears National Monument: Did Basketmaker II populations displace an existing population, or did they settle a very lightly used area?

INVESTIGATE the effects of the Chaco World in southeastern Utah. Chaco was a strong and vast ritual, economic, and social phenomenon of the AD 800s–1100s. This topic had broad interest among the experts, who identified several issues or research topics to pursue.

- » In Pueblo I, people left Cedar Mesa, and people built the first great kivas and villages in eastern Bears Ears National Monument and beyond—why? (Great kivas were community ritual structures that served to integrate local and regional populations as people began living together in larger, village-scale settlements.)
- » What is the history of early great kivas and the communities that built them, and how do they relate to subsequent developments of Chacoan great houses in southeastern Utah?
- » The high degree of preservation of the local landscape and the ways in which Chacoan roads and

associated settlements and features are increasingly documented highlighted the need to further document and protect a broad “roaded landscape.”

- » New technology, such as LIDAR, will be helpful in documenting subtle roads in heavily vegetated areas.
- » Several researchers suggested that much of Four Corners archaeology might be interpreted as engagement with or resistance to the Chaco World.

EXPLORE northward Kayenta movement into the southwestern area of Bears Ears National Monument.

- » Why did Kayenta groups expand northward into the southwestern portion of Bears Ears National Monument?
- » What was the nature of the interaction between Kayenta groups and Mesa Verde affiliated populations that were moving into Bears Ears National Monument from the east?

CONSIDER the role of cotton within Bears Ears National Monument and the larger Mesa Verde region.

- » People probably grew cotton at some low-elevation settings within Bears Ears National Monument or even more likely to the west along the Colorado River and its tributaries.
- » There is evidence of processing and weaving cotton in Bears Ears National Monument, and it is likely that raw cotton and completed textiles were traded eastward to the Mesa Verde area.
- » Studies of perishables of cotton and other materials are ongoing through the Cedar Mesa Perishables Project (friendsofcedarmesa.org/perishablesproject/).

INVESTIGATE westward Mesa Verde movement into Bears Ears National Monument. Some of this is evidenced by pottery styles, but public architecture in the form of towers (page 28) has a significant presence within Bears Ears National Monument.

EXAMINE regional depopulation of the Four Corners. This is a research question of very long-term interest in archaeology. There is still a great deal of future research that could be pursued.

STUDY Paiute and Ute arrival and subsequent history in Bears Ears National Monument. This has received very little attention to date. It is a high priority because the archaeology is very subtle, and therefore requires focused research strategies. This archaeology is also very fragile and thus threatened by increased visitor activity.

STUDY Navajo arrival and subsequent history in Bears Ears National Monument. Like Paiute and Ute, this has received very little attention to date. It is a high priority because the archaeology is very subtle and therefore requires focused research strategies. This archaeology is also very fragile and thus threatened by increased visitor activity.

AREAS IDENTIFIED FOR FOCUSED RESEARCH

The area along Cottonwood Wash around and north of Bluff was given very high priority as a place people intensively used in the past that has not been well documented by professional archaeologists. Grand Gulch was identified as a particularly sensitive area that merits increased inventory and protections. The towers of Beef Basin need better documentation. They are fragile and have high research value.

HISTORIC ARCHAEOLOGY OPPORTUNITIES

There is substantial research potential for historic period archaeology and documentation projects that could engage area residents and visitors, including study of the Outlaw Trail, the Hole-in-the-Rock Trail, trapping and trappers, mining camps from the 1890s, historical oil-drilling settlements, and Navajo Long Walk sites. Inscriptions and graffiti from early archaeological expeditions and an array of other names of historical figures, dates, and other markings left behind have substantial and proven research and historical value. These are also fragile and threatened.



A drilling rig on Cyclone Flat, looking north-northwest toward Bears Ears. PHOTO: © ADRIEL HEISEY

Cultural Landscapes and National Monuments

The Antiquities Act of 1906 was signed into law just over eleven decades ago. The Act gives the president of the United States the authority to “declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Federal Government to be national monuments.” Much has changed in the nation and in the ways we celebrate our diverse heritage since the Act’s inception.

Much has also changed in the discipline of archaeology. As archaeology matured over the course of the past century, it became apparent that archaeological sites were actually a finite resource. Once

destroyed by erosion, vandalism, or scientific excavation, an archaeological site is gone forever and cannot be restored. It also became apparent that new technologies and the accumulation of broader sets of information were sources of greater insights regarding the past than had been imaginable a century, a decade, or even a year earlier.

Equally important has been the recognition that spatial scale is of critical importance. People of the past lived on landscapes that were diverse physical and natural environments, and social networks were of vital importance to the success of ancient human groups. As a result, the landscape-scale approach has emerged as a central trend in archaeological approaches to the past.

It is essential to recognize that the places where archaeologists work and conduct research are the former territories of American Indian groups. Modern tribal groups have



Sunrise over two deep canyons in Bears Ears National Monument. The canyons that come together to create an isthmus with a promontory at its end. Note the wall remains in the middle foreground. PHOTO: © ADRIEL HEISEY

This is one of the most powerful elements of the landscape approach that a national monument such as Bears Ears offers: the opportunity for tribes and other stakeholders to collaboratively manage and interpret a rich and living tapestry of interrelated places.

strong connections to these places, and they often value different aspects of the Bears Ears National Monument landscape than professional archaeologists. Though this can lead to conflict, increasingly archaeologists, tribes, and other interest groups are finding that there are paths to common ground. This is one of the most powerful elements of the landscape approach that a national monument such as Bears Ears National Monument offers: the opportunity for tribes and other stakeholders to collaboratively manage and interpret a rich and living tapestry of interrelated places.

Bears Ears National Monument had multiple advocates, but the leaders were five tribes. Though these tribes were not always allies in the past, Bears Ears National Monument brought them together into new collaborative ways of working together. Archaeologists, environmentalists, the recreation industry, and many others have embraced this collaborative approach. Celebration of these living landscapes of the past—the core theme of this report—opens up creative approaches to landscape-scale conservation, recreation, and perhaps ultimately, social integration. Bears Ears builds upon a rich past, but even more, it opens broad opportunities for the future.



Aerial view of the same promontory showing structures at sunrise. PHOTO: © ADRIEL HEISEY

Two More Regional Maps

A landscape perspective on the Bears Ears area is not, in fact, a recent innovation. Over a century ago, archaeologist T. Mitchell Prudden prepared a report on the archaeology of the San Juan River watershed, including southeastern Utah. In his introduction, he commented that “it is both convenient and instructive to recognize large natural districts corresponding to the great drainage areas.” We include here a redrawing of Prudden’s map of the archaeology of the San Juan watershed (page 48). Bears Ears National Monument is shown, and the colored zones on the map show the distribution of clusters of archaeological sites across the landscape. Prudden encouraged attention to archaeological preservation in the closing sentence of his report: “It is to be hoped that steps may soon be taken to protect these relics of a most instructive phase of primitive culture, and that authorized and intelligent research may be encouraged to enter a field still full of the promise of most interesting discovery.”

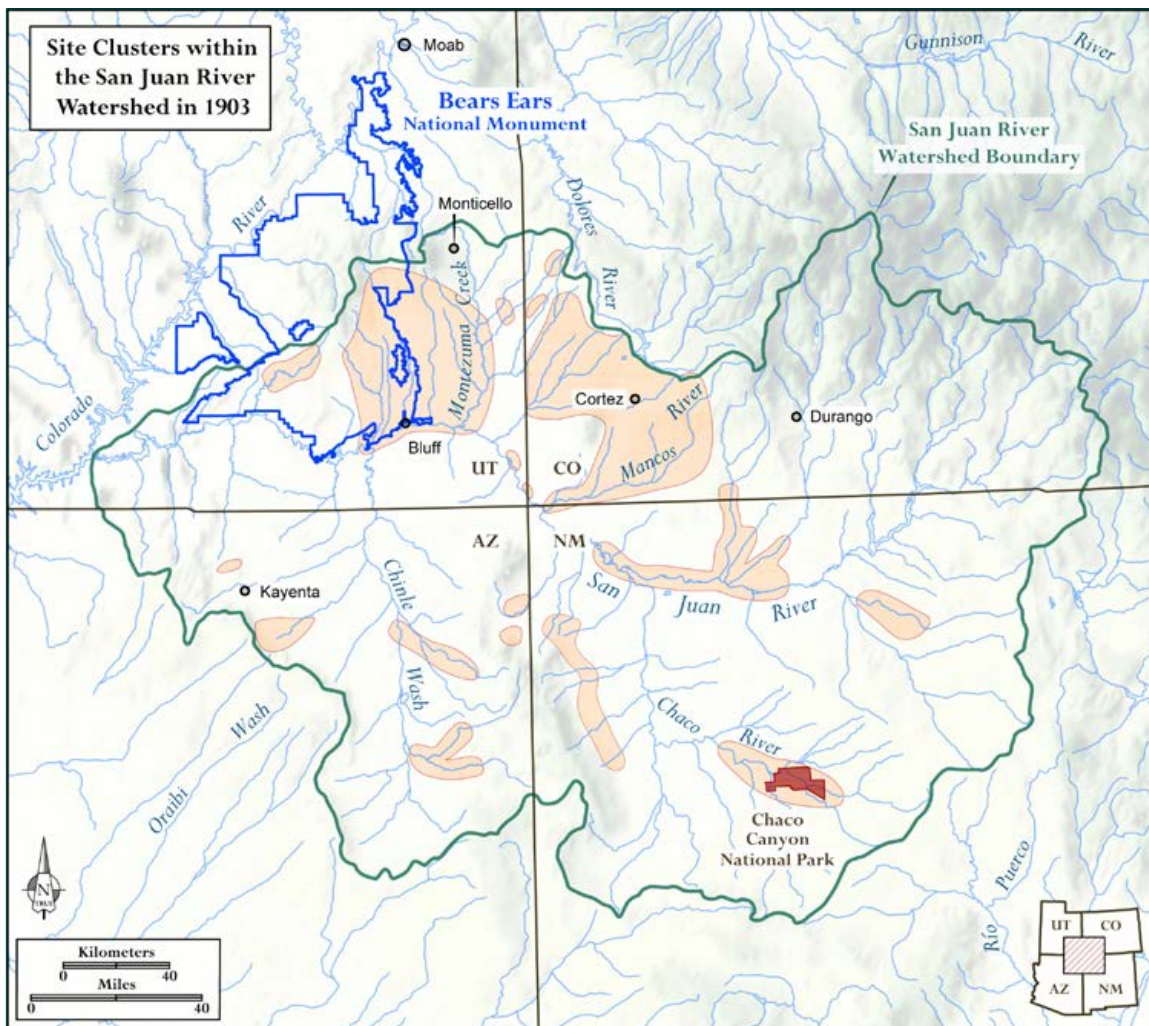
Although Prudden notes that he spent several years compiling his map, more than a century of subsequent archaeological investigations has ensued. Archaeology has emerged as a formal discipline with graduate programs in universities and an extensive private employment sector known as cultural resource management. Today, when an archaeologist takes a landscape-scale perspective, it is generally possible to access a state-level information repository where archaeological records are compiled from the wide range of contexts where archaeologists currently work. In Utah, the Antiquities Section of the Utah Division of State History manages that state-wide digital information source. In early 2017, personnel from the Antiquities Section compiled a map and tally of known sites within Bears Ears National Monument and within surrounding San Juan County that they recently made available to us. Review of that map (not reproduced here because it illustrates site location—though at an extremely coarse scale) provided two useful insights to highlight here.

First, one must use caution in making judgments about archaeological site density from a map of known sites. For example, the official Utah records are very incomplete south of the San Juan River on the Navajo Reservation, and they reflect large numbers of recent development projects in the area around Alkali Ridge, a National Historic Landmark, to the east of Bears Ears National Monument. Furthermore, many sites within Bears Ears National Monument are not yet entered in the Utah database, so density is underrepresented within the new national monument.

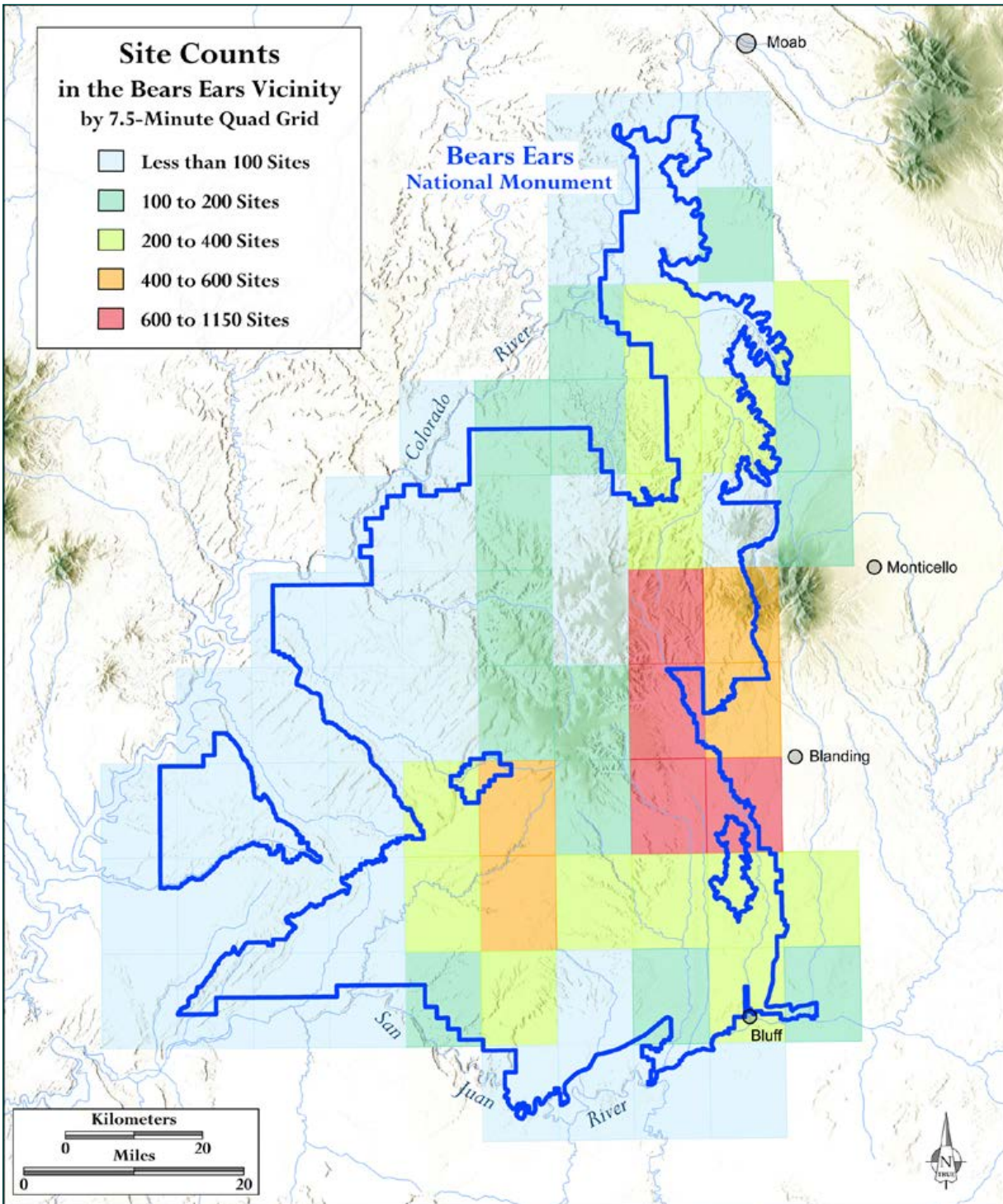
Second, and despite these caveats, this information was used earlier in this report to support the estimate that some 100,000 or more archaeological sites are likely to be present within Bears Ears National Monument (page 4). Moreover, the site distribution to the east of Bears Ears National Monument displayed on the Antiquities Section map supports the fact that the area between Bears Ears and Canyons of the Ancient National Monument, which starts at the Colorado state border, was once part of a continuous cultural landscape.

The Antiquities Section recently provided additional data on the number of sites known for each of the U.S. Geological Survey 7.5-minute topographic maps that intersect with Bears Ears National Monument. That information was used to make a map (page 49) of known site counts across the monument area. In many ways, this map reflects the intensity of past archaeological study. It also represents a dim reflection of the archaeological site density. For example, comparing this map with the information displayed on our series of “population intensity” maps as defined by the experts reveals a number of close correlations between past population intensity and the areas currently known to have higher site frequencies. This is valuable guidance, as long as we keep in mind that we currently know about roughly 10 percent of the sites that are present within Bears Ears National Monument.

The pairing of these two maps supports the value of a landscape perspective for archaeological research and for preservation efforts. A focus on those two core goals was the motivation for the Bears Ears Archaeological Experts Gathering—and we will continue to pursue these goals in Bears Ears National Monument in the future.



This map is a redrawing of a 1903 map of archaeological sites from the San Juan River watershed in the Four Corners area compiled by archaeologist T. Mitchell Prudden. Note that only about half of the Bears Ears National Monument falls within the San Juan watershed, which is why sites are not reported in the northern portion of the monument on this 1903 map. Prudden was an early advocate of a landscape perspective on archaeological resources, and many archaeologists have adopted this perspective over the ensuing century.



The Antiquities Section of the Utah Division of State History provided the count of known archaeological sites for each U.S. Geological Survey 7.5-minute-topographic-map that intersects or falls within the boundaries of Bears Ears National Monument. This map displays site counts per map in broad frequency intervals. This information strongly reflects past intensity of field survey, and to a limited extent conveys archaeological site density over Bears Ears National Monument. It is projected that a mere 10 percent of the national monument has been surveyed, and it is expected that more than 100,000 archaeological sites are present within Bears Ears National Monument.

BLUFF EXPERTS GATHERING

July 22–23, 2017

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Final page: Aerial view of the Bears Ears and part of the southern escarpment of Elk Ridge. Photo: © Adriel Heisey

PHOTO: R. E. BURRILLO





BEARS EARS NATIONAL MONUMENT
Established on December 28, 2016