Leaving Mesa Verde: The Great Pueblo Migrations of the 13th Century

Bill Lipe
Prof. Emeritus, Washington State University

Spokane Chapter, AIA
May, 2014
Cliff Palace, Mesa Verde. 1891

Nordenskiold photo, 1891
For over 120 years, archaeologists and the general public have asked “Why did the Mesa Verde people leave, and where did they go?”
The Big Picture: Massive consolidation of SW farming population between 1250 and 1500. Pueblo people still live in most areas shown on righthand map.

Images courtesy of Bill Doelle and Archaeology Southwest
A more detailed timeline

A decline in both total population and aggregation in fewer but larger settlements were involved.
This temperature record correlates with the pattern of SW population coalescence. The 1400s were probably cooler and drier with less snowfall, shorter growing seasons and a weaker summer monsoon. But what about the 1200s, when the Mesa Verde area was depopulated? Each area has its own history.
In the AD 1200s, the Mesa Verde culture area extended from east of the Mesa Verde west to the Colorado River and south to Farmington, NM.
Another big picture. This shows distances from the Central Mesa Verde area to areas where migrants settled—especially the N. Rio Grande.
Peter Pino (Zia Pueblo) at Cliff Palace. Pueblo Indian groups traditionally trace their ancestry—at least in part—to the Mesa Verde region.
Some Background: Maize and people in the Northern Southwest

- Introduced from Mexico ca. 2000 BC
- Requires 12-14 in. precip.; 110-120 days growing season (dry-farming)
- Maize dependency by 1000-500 BC
- Population “take-off” 500 BC-500 AD

Present-day Hopi blue corn
The Pueblo II period (AD 900-1150) saw the rise of Chaco Canyon as a major cultural and religious center. The main centers probably housed families of elite status.
View west from Mesa Verde NP. In the mid 1100s, Chaco declined and population boomed in the Mesa Verde region.
The “Village Project” study (ca. 2,000 km$^2$) documented the population boom and bust in the Central MV area
Three population estimates for the “Village Project” study area. They show a peak of 2500 to 4400 households (15,000 to 26,400 people) in the mid-1200s.

(Varien et al. 2007)
Typically, Mesa Verde people lived in small homesteads near their fields. In the 1200s, these units became the “building blocks” of large villages.

Left: “Prudden unit” household complex: primary component of Mesa Verde settlements from AD 900 through the 1200s.

These “household” kivas were both domestic and ritual spaces.
In the 1200s, large villages formed in the open around the heads of canyons. Here, Sand Canyon Pueblo, west of Cortez, CO.
A computer reconstruction of Sand Canyon Pueblo (AD 1250-1280). It had 90 household kivas and 400 rooms.
In the 1200s, cliff dwellings were also built where there were good natural shelters. Here, Spruce Tree House at MV NP
In the AD 1200s, people increasingly left the Four Corners area, migrating south and southeast, mostly to regions that already had related Pueblo populations.
The N. Rio Grande area was likely the destination for most Central MV emigrants; Hopi or Mogollon Rim areas for those farther west

- Summer rainfall more reliable to S and SE of MV region
- There were existing relationships and general cultural similarities
Multiple lines of evidence for Central M.V. area migrations to N. Rio Grande

- **Linguistic**
  - Tewa place names and language metaphors

- **Historical**
  - Present-day oral traditions, Spanish accounts

- **Biological**
  - Mesa Verde-N. Rio Grande similarities increase after AD 1250

- **Demographic**
  - Rapid increase in N. Rio Grande concurrent with decrease in the M.V. area

- **Archaeological**
  - Weak—indicates either no migration or substantial cultural change—we’ll return to this later
So what caused the Mesa Verde area population to emigrate in the late AD 1200s?

“Push” factors
- Climatic problems
- Warfare
- Much larger villages; less flexible settlement pattern
- Domestic turkeys as a substitute for wild game
- Risks from over-reliance (>80%) on maize and dry-farming
- Instability in modes of community leadership/organization?

“Pull” factors from areas south and southeast:
- More reliable summer rainfall
- Emerging new forms of socio-religious organization
- Opportunities for socio-cultural renewal
The “Great Drought” of 1276-1299 originally recognized in the 1920s was part of a geographically extensive “mega-drought.” However, Mesa Verde migrations probably began somewhat before 1270.

Tree-ring based reconstruction of Colorado River flow indicates winter precipitation declined throughout the 1200s—not just during the “Great Drought.”
Tree-ring dates indicate cutting trees for building or remodeling declined before 1276.
Possible evidence of cooling in the 1200s—This would have affected MV upland dry farming

There were major volcanic eruptions elsewhere in the world around 1260—might have contributed to some bad crop years

Wright 2012
The temperature record correlates with the pattern of SW population coalescence. The 1400s were probably cooler and drier with less snowfall, shorter growing seasons and a weaker summer monsoon. And the 1200s, when the Mesa Verde area was depopulated also shows declining solar insolation (Wolf Minimum).
The entire population of Castle Rock Pueblo (ca. 75 people) was massacred in the AD 1270s. Other late 1200s sites show evidence of violence as well.

Warfare!
Examples of defensive sites in SE Utah (far western part of Mesa Verde area)
Large Villages!

Dispersed small settlements gave way to large villages in the 1200s.

Cliff Palace

Living in large villages limited ability of families to move their homes and fields in response to climatic fluctuations.

Yellow Jacket Site
In the AD 1200s, domestic turkey-raising was greatly increased to compensate for depletion of game in vicinity of large villages. More corn had to be raised to feed them.
“Out on a limb”

By the mid-1200s, the Central Mesa Verde people were more vulnerable to environmental and social problems. Population at an all-time high; isotopic data indicate over 80% dependence on maize for food.

Warfare encouraged aggregation, which limited flexible household-level movement to adjust to variations in rainfall and growing season. Aggregation may have promoted new forms of community organization (e.g., evidenced by new kinds of “public architecture”).

Reliance on turkeys in response to game depletion put more pressure on the farming system.

Was migration a path to socio-cultural renewal?
We’ve reviewed some “push factors” that may have contributed to migrations out of the Mesa Verde region. What factors exerted a “pull” to the N. Rio Grande?

- More reliable summer rainfall and longer growing seasons
- Related Pueblo communities in the N. Rio Grande (and elsewhere) were growing and evidently successful
- New forms of social and religious organization were being developed in the Little Colorado and Rio Grande areas

Mesa Verde area gave up many cultural patterns when they reached the N. Rio Grande, suggesting receptivity to new socio-religious ways of organizing communities.
Many standard Mesa Verde cultural traits “didn’t make the trip” when people left the area in the late 1200s. Instead, the M.V. migrants appear to have adopted a strategy of “blending in” with existing Rio Grande communities (unlike some other migrants from the 4 Corners area).

**Culture traits that were given up:**

- Household kivas
- Kiva styles (southern recess, strong n-s orientation, bench and pilasters)
- Towers
- D-shaped buildings
- “Front-oriented” village plans w/bilateral layout
- “Pecked-block” style masonry

Various types of artifacts:

- Mugs
- Kiva jars
- Classic Mesa Verde B/W decoration
- Bone scrapers made of deer humeri
“Didn’t make the trip”

Above: Large “D-shaped” structure. (“Sun Temple” at Mesa Verde Park

Right: Tower (at Hovenweep National Monument
Other traits left behind

Left: Mesa Verde mug and classic MV design style on bowl

Above: scraper made from a deer bone. Right: “Kiva Jar” form
Gone forever

Small household kivas

“Front-oriented” villages with “public architecture”

Gone forever
What kind of cultural patterns did the M.V. migrants adopt or help create when they settled in the N. Rio Grande?

Migrants in the early and mid 1200s lived in dispersed small habitations not unlike earlier patterns in the Mesa Verde area. (Here, a small site on the Pajarito Plateau).

However, they adopted existing Rio Grande kiva styles and directional orientation (units face east instead of south). Evidence of “blending in” rather than “standing out”? 
By the late 1200s, “plaza pueblos” were becoming the norm in the N. Rio Grande

**Burnt Mesa Site—Built 1270s-1280s.** Differs from a Mesa Verde village:
- Not front-oriented
- No household kivas
- Not bilateral
- No “public architecture”
- Single kiva in the plaza

Implies a shift away from the Mesa Verde pattern of household & lineage autonomy
N. Rio Grande plaza-oriented villages rapidly increased in size—Arroyo Hondo, early 1300s.
The archaeological evidence indicates major cultural changes accompanied the migrations of the 1200s

- Many MV traits that “didn’t make the trip” were part of long-lived patterns that emphasized household and lineage autonomy (and that had produced Chaco).
- In the N. Rio Grande, both the existing population and new migrants were shifting to new forms of organization, exemplified by the “plaza pueblo.” These changes may have created more stable communities. New evidence indicates much less violence.
- This shift may reflect new socio-religious patterns that were sweeping through the whole Pueblo world in the 1200s. The chance to be part of these developments may have been a “pull factor” for MV migrants.
- Recent work indicates that conditions were very bad for MV people who stayed behind after the “great drought” started in 1276. No evidence of occupation after early 1280s.
1300s & 1400s saw a florescence of art and ritual in the Rio Grande, as new socio-religious patterns proliferated. These had their roots in the social transformations of the late AD 1200s.
The post-migration Pueblo communities developed ways to hold large communities together without a strong central authority. No more Chacos!

Pueblos today have religious and other organizations that draw members from across the various kin groups. Power is allocated among multiple groups, each of which has a role to play in ceremonies and in keeping the community functioning. Many of these systems may have emerged or been strengthened in the “migration period”
Tessie Naranjo and her grand-niece Rosie Simpson (from Santa Clara Pueblo) visit a Mesa Verde site dating to the 1200s.

Although I’ve emphasized how the Mesa Verde migrants may have changed some aspects of their culture to adapt to a new situation, they also retained many beliefs and practices from earlier times. The Mesa Verde area remains an important part of their cultural identity and heritage.
“Movement is part of us... People have moved from place to place and have joined and separated again throughout our past, and we have incorporated it into our songs, stories, and myths because we must continually remember that, without movement, there is no life.”

Tessie Naranjo, 1995