

## Paleo-Indians in Virginia

It appears the first Indians to occupy Virginia were hunters. They traveled widely and interacted often with each other. Constant movement enabled the "Paleo-Indians" (the people who first settled Virginia, perhaps 13,000 years ago) to find new herds of mastodons and caribou in the spruce-fir forests and open grasslands that were common in Virginia at the end of the Ice Age.

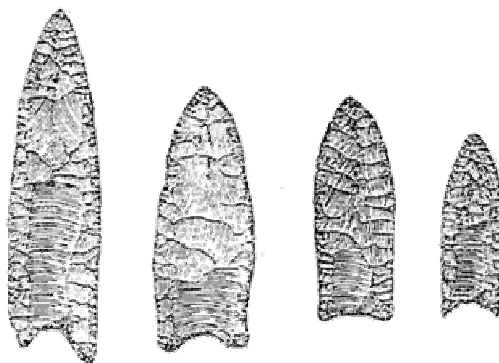
As best we can tell, the Paleo-Indians were not living as isolated bands of people, and did not avoid contact with others family groups. They were social, though the initial interactions between strangers must have been very stressful. The first Virginians "relied on a shifting settlement pattern and collecting strategy which consisted of family groups that set up central base camps from which they made periodic trips out to short-term extraction camps to collect resources and hunt until the resources of a certain area became exhausted, at which point the band relocated."<sup>1</sup>

How do we know that? Our best clue is the tools used by the hunters and remnants of their camps, including a few seeds and bones charred by campfires. The stone tools have survived unchanged over the centuries, unlike clothing, food, or even bones. Archeologists assign different names to different stone tool designs, and recognize cultural changes between different time periods/places by variations in the specialized designs of stone tools.

Tools used on spears and other devices for killing animals are called "points." Other stones were shaped to serve as knives, scrapers, awls (needles), and other purposes. Native Americans also shaped antlers, wood, and shells. A small amount of copper was used for jewelry, but Native Americans in Virginia never developed a technology based on metal. They lived within a Stone Age culture until the Europeans arrived.

Intact, undamaged tools from the Paleo-Indian period are rare. Most have been reworked, with flakes of stone chipped away to repair a tool after damage. In addition, there is much stone litter - also known as debitage - from chipping a tool out of a block (*core* or *blank*) of raw stone. *Lithic scatters* are waste rock, discarded as a point was shaped. Lithic scatters are most common near quarries, but may also be found near water sources and vista overlooks. Think the appreciation of scenic views is new? Someone else could have admired the same scenery sometime over the last 10,000 years, while repairing a point that was damaged during a mastodon hunt.

*NOTE: Arrowheads are "points," but not all points are arrowheads. In Paleo-Indian times, from the first human arrival in Virginia perhaps 13,000 years ago until 8,000 B.C., there were no bows and arrows. That technology had not been invented when the first humans walked into Virginia. Once pottery was invented, the designs and styles of bowls and other items provide additional clues to Indian lifestyles before contact with Europeans. In centuries to come, future archeologists might study the cultural differences between Singapore and Norfolk during the 21st Century by examining the different types of computer chips found in our landfills.*

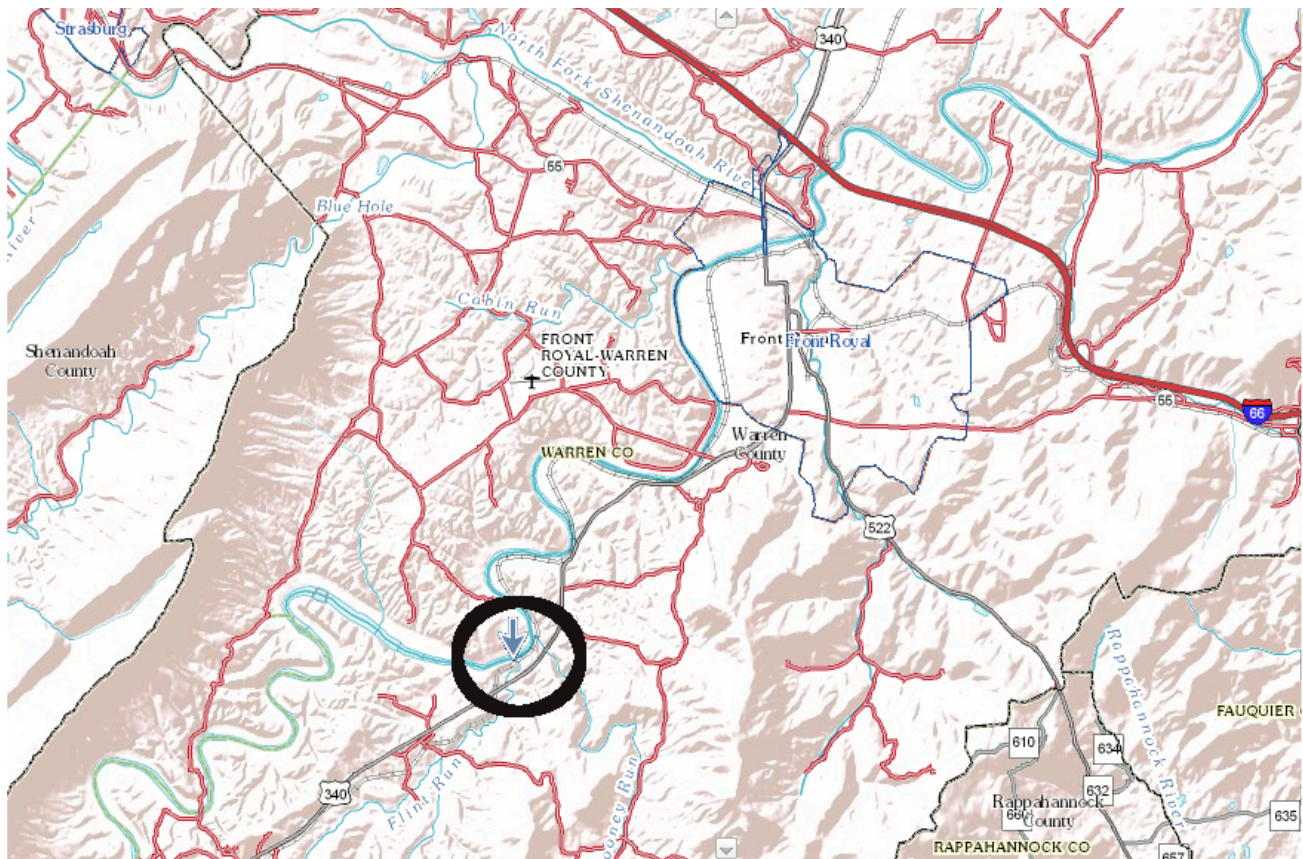


Clovis Points, with distinctive "flute" of stone chipped out of the center at the base

Source: [National Park Service](#)

One of the oldest point designs, the "Clovis" points, are common throughout [Paleo-Indian sites across the Southeast](#). The namesake discovery site is the town of Clovis in New Mexico, but Clovis points are found in the oldest archeological sites in Virginia. When we find the same style of point in many different locations, that suggests that the bands of hunters traveled widely and interacted with each other regularly. Physical and cultural barriers were not high enough to cause separate, independent technologies to develop in isolated locations. During the Paleo-Indian time period, as the Ice Age ended, the climate and the vegetation of Virginia may have been consistent. Hunters and gatherers ranged across similar fields and forests throughout Virginia, and the same Clovis point designs were crafted by many different family groups.

Not only can we classify the designs of the tools - we can also identify some quarry sites where tools were made. In Virginia, the Thunderbird site in Warren County along the Shenandoah River was used for 2,000 years. That makes it one of Virginia's first industrial sites.



general location of Flint Run Archeological District (including Thunderbird quarry)

Source: USGS [National Map](#)

At the Thunderbird quarry, the manufacturing was just rough work, flaking off the obviously excess rock, before the stone masons hauled away the chunks of good "chert" that flaked in the right pattern to form useful points with sharp edges. They refined those chunks later (away from the site) into the spears, scrapers, fine arrow points, cutting instruments, etc. It makes sense, especially if more than one tribal group used the same quarry, for the natives to grab-'n-go rather than linger around a place where conflict could occur.

In 1998, the Virginia Department of Transportation (VDOT) identified the Brook Run archaeological site on Route 3, ten miles east of Culpeper and about 100 yards east of the intersection with Carrico Mills road (Route 669). When VDOT routinely examined the planned route of a 4-laning of the Germanna Highway, the shovel test pits in a dense grove of cedar revealed a surprising concentration of debitage, or waste rock flakes that had been discarded.

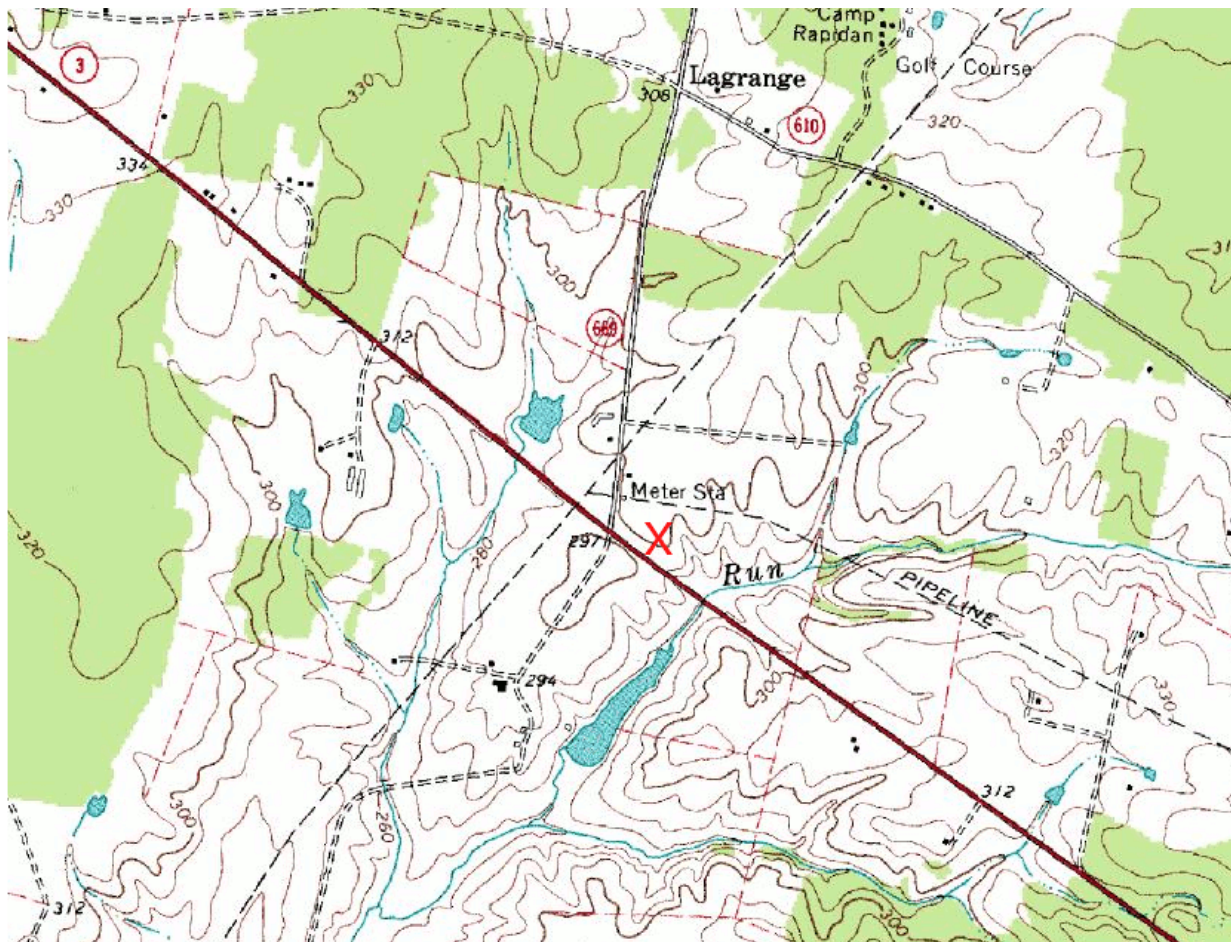
The environmental assessment process to identify unknown cultural resources before altering the landscape worked, in this case. Underneath that cedar grove was the residue of one of the earliest human campsites in North America. The previously unknown location was away from recognized sensitive areas (primarily near water sources), and its discovery was a complete surprise. Highway engineers initially saw no distinctive features there.

What attracted people to that Culpeper site, now designated as 44CU122? (NOTE: "44" stands for the state of Virginia, because the record-keeping system for cultural resources was developed in the days before 51 was assigned as the state's Federal Information Processing Standard or FIPS code. "CU" stands for Culpeper County, and "122" designates the individual site in the county.)

About 11,000-14,000 years ago, one or more bands of early Virginians quarried jasper there from a vein in the local red Triassic sandstone. The thin vein of jasper, just two feet wide, was injected by hot fluids when the bedrock cracked as the Triassic Basin formed. When hammered with a harder stone, the surrounding Triassic sandstone would crumble into loose sand grains. However, the yellowish jasper would crack with a different pattern, creating flakes with sharp edges. Such flakes provided the knives, scrapers, spearpoints, and other cutting tools used by the Paleo-Indians.

By the time the highway engineers examined the site, prior to widening Route 3, the jasper vein and prehistoric quarry had been covered by recent sediments. Fortunately, the sharp eyes of the archeologists spotted a pattern of flakes that warranted further study, and testing of organic material from hearths at the site revealed that it is one of the oldest known locations of humans in Virginia.





Brook Run and Route 3, location of jasper quarry

Source: [Microsoft Research Maps](#)

Modern Virginians who can distinguish a Mercedes car from a Jaguar might not be able to distinguish quartz from sandstone, or jasper from basalt. In prehistoric times, stone tools were a key part of everyday life - and the skill of distinguishing different types of rocks was critical to survival. The local bands of early hunters and gatherers were savvy about rocks. They lived in the Stone Age, a time when technology was also based on silicon. Jasper, chert, and quartz are different mineralized forms of silicon dioxide ( $\text{SiO}_2$ ), with a mineral structure in a form different from the base of modern computer chips, of course. Even 10,000 years ago, when the technology was "primitive" compared to modern space travel and telecommunications, people depended upon tools to perform specialized jobs.

After the Industrial Revolution, we have become disconnected from the natural sources of tools and grown dependent upon items we can buy at the hardware store. Most modern Virginians might know the difference between a Personal Digital Assistant (PDA) and a cell phone, but few modern Virginians have the geological expertise of the First Virginians.

If you walked from Colonial Beach to Harrisonburg, would you know when you were no longer walking on the Coastal Plain and had crossed the Fall Line? Would you be able to say "I'm walking on the metamorphosed sediments underlying the Piedmont" or "Hey, I'm in the sandstone of a Triassic Basin"? Would you recognize when you have crossed onto the greenstone of the Blue Ridge (near Route 29) or the limestone in the Shenandoah Valley (before you reached Route 340)?

Centuries years ago, the residents in the area would have use far different terminology to distinguish the rock formations, but the ability to distinguish different rock types would have been common. They obviously spotted a tiny seam of jasper in Culpeper County, and extracted the valuable resource without having any metal tools. Who is technologically challenged - the modern resident of Virginia with fancy computers but minimal expertise in understanding the surrounding landscape, or the Stone Age residents who lived in Virginia long long ago?

Someone 11,500 or so years ago was able to spot a small outcrop of rock, perhaps 1-2 feet wide, that was different. Maybe they looked around while resting, as the group of humans kept travelling in order to gather food from plants or hunt game in different habitats. Whatever, for perhaps 500 years, different bands extracted that unique jasper and converted it into the high-tech tools of the time.

The jasper was far easier to "work" than the sandstone. The Paleo-Indians selectively dug it from the quarry, leaving the abundance sandstone behind. When the site was finally abandoned, there was a gash in the ground 1-2 feet wide and about 15 feet deep. Imagine swinging a hard stone in that tight space to break off flakes of rock at the bottom of the vein, when the quarry was narrow and deep. Think you would have been at risk of banging your knuckles, getting cut or even

blinded by a slice of stone, or perhaps getting claustrophobia in that tight space? To beat the jasper free at the bottom of the vein, the miners held stones in their hands and hammered the jasper free, while squeezed into a dark and tiny crack in the ground. One possibility is that the prehistoric miners were young children, held upside-down by their ankles as they were pushed down into the narrow dark crevice to break off valuable pieces of jasper.

The jasper was not processed into tools at the quarry. It was carried away to some other place. The archeologists working with VDOT found 700,000 flakes, but almost all were associated with mining the lumps of jasper rather than chipping those "blanks" into individual tools. Those tools were essential for killing, skinning, and butchering an animal for food. Perhaps the band of Virginians took the chunks away in order to do their detail work in a safer location, where there was less risk of a competing band stealing their hard-earned raw material. That would suggest the quarry workers were not only squeezed into a tight space - they were also working in a hurry.

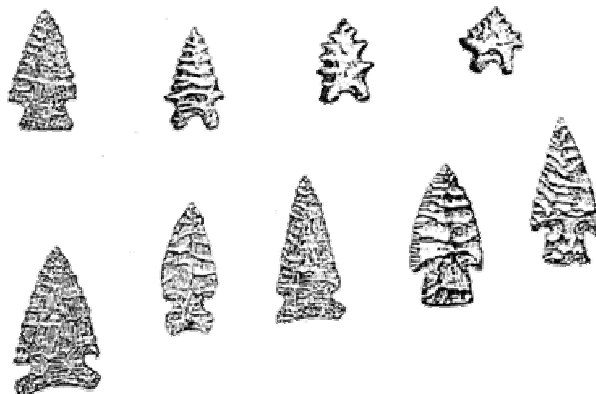
After 500 years, the quarry was abandoned. Roughly 10,600 years ago, someone else stopped at the site and left behind points made of rhyolite. These were probably from Maryland or Delaware. There's a possibility that the traveler who left behind the "Kirk" points had come such a distance, but more likely the tools had been traded from band to band until a local group obtained them.

We date Virginia's archeological sites largely through the charcoal remaining from old cooking and warming fires. At Brook Run, the dates are consistently in the range of 11,000-11,500 years before present (BP). The wood remaining in the ancient hearths is often spruce, suggesting that the climate at that time was much colder than today. One chunk of white oak charcoal at Brook Run was about 2,000 years older, but it may be the wrong date for human occupation at the site. It could be an old remnant of an ancient forest fire that was disturbed in the mining operation, and ended up in the sediments that washed into the excavation created by the rock miners years later.

The end of the Paleo-Indian period, and the start of the Archaic period, is marked by new designs of points. Finding different designs in different locations that were occupied at the same time period suggests that the occupants of those two places were isolated by physical or cultural barriers.

Around 8,000 B.C., mobility was affected by the emergence of new physical environments - river valleys with oak-hickory forests. The mastodon disappeared, and was replaced with deer and other smaller game animals. As travelling bands focused on hunting and gathering from separate valleys, they became more isolated. Learning from one another may also have been blocked by evolving religious or political barriers, and the emergence of separate languages.

The presence of a significantly new stone tool or pottery design in a location suggests human migration. New designs may appear quickly, without gradual changes in the preceding design, when a place is occupied by a new group. Immigrants bring new cultural patterns. By tracing the locations of archeological sites with a specific design, it is possible to show the migration paths of the past.



Dalton, Palmer/Kirk, and other points developed after Clovis

Source: National Park Service, [Terminal Paleoindian Occupations in the Southeast \(10,800-10,000 rcbp, ca. 12,900-11,450 B.P.\)](http://www.nps.gov/seac/SoutheastChronicles/KEMO/KEMO-Cultural-Overview.htm)

## [Archaic Indians in Virginia](#)

## [Woodland Indians in Virginia](#)

### Links

- Virginia Department of Transportation - [Brook Run archaeological site](#)

### References

1. Robert Hellman, "Kennesaw Mountain National Battlefield Park Cultural Overview," National Park Service, 2003 <http://www.nps.gov/seac/SoutheastChronicles/KEMO/KEMO-Cultural-Overview.htm> (last checked July 5, 2010)

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[From Paleo-Indian to Woodland Cultures: Virginia's Early Native Americans](#)

[The \*Real\* First Families of Virginia  
Virginia Places](#)