



Native American Horses

Who? When? How?

By Gene Gade

Historians have simply been wrong about when and how Native Americans acquired horses in western North America!

Indians on horseback. In the West, it is hard to envision one without the other. Yet, the history of how and when the Indian and horse relationship came to be has been controversial among academics for many years.

The dominant narrative for decades has been that Native Americans did not obtain significant numbers of horses until the Pueblo Rebellion of 1680 A.D. According to that version of events, the Spanish colonial law strictly forbade Indians from acquiring horses. However, the Rebellion caused Spanish colonialists in the Southwest to flee for their lives to Mexico, in the process abandoning their ranches and settlements so rapidly that thousands of horses were left behind. These vast herds, so the story went, were captured and sold by Puebloans to nearby tribes such as the Comanches, Utes and Shoshones. Horses were then dispersed northward to other tribes, both east and west of the Rockies, via trading or raiding. According to that hypothesis, horses proliferated and were distributed all the way into Canada in less than 100 years.

Native Americans have long disputed that timeline of acquiring horses. Several tribes have oral traditions that they had horses significantly earlier than 1680. However, historians gave little credence to these verbal accounts, depending instead on sparse written records of Conquistadors and often-biased observations of Euro-American explorers. Most of the latter were made in the 1700's, well after the Pueblo Rebellion and horse dispersal occurred.

Science Catches Up With Oral Traditions

Recent research suggests that the traditional tribal accounts were closer to truth than history books. In March 2023, the prestigious journal *Science* published an article titled “*Early Dispersion of domestic horses into the Great Plains and northern Rockies*”. The primary authors, William Taylor, Pablo Ribado and Ludovic Orland joined with 84 co-authors representing several fields of study and 66 institutions from around the world to publish their findings.

The paper included studies of horse bones recovered from several archaeological sites including one from southwestern Wyoming and others from Idaho, New Mexico, Kansas and Nebraska. The bones were thoroughly examined by experts in horse anatomy, then carbon-dated and analyzed using state-of-the-art technologies including DNA testing and assay of stable isotopes of strontium and other elements. Strontium is an element that is right below calcium on the Periodic Table and has similar chemical properties. Minute quantities of strontium are found in an animal's food and water. Thus, like calcium, strontium atoms are incorporated into growth layers in teeth and bones.

Different food and water sources have distinctive chemical properties. Tiny quantitative and qualitative differences of chemistry within layers in teeth indicate changes in diet that may, in turn, indicate seasonal differences or movements from one area to another.

Notable Results Of The Research

First, there is conclusive evidence that Native Americans possessed some horses by 1550, possibly earlier, and that horses were present at locations far from the Spanish settlements. That is more than a century before the Pueblo Rebellion!

Second, Native American horses are descended primarily from Spanish breeds, with latter influx of genes from English and French horse breeds.



Horses enabled Native Americans to move much farther, faster and with heavier loads, but their cultural importance was much more than mere logistics. Horses are revered as sacred kin by many Indigenous Americans.

It has long been known from fossil records that horses evolved in North America and then migrated across the Bering land bridge to Asia during the Ice Age. They became extinct in North America after the continental glaciers retreated, probably due to a combination of rapid climatic/ecological changes and, possibly, because they were over-hunted as food by humans when they entered the continent. However, horses were domesticated in Eurasia, bred in huge numbers, used extensively by several cultures and then reintroduced to the Western Hemisphere by European colonialists.

DNA studies strongly support the belief that Indian horses are descended from European breeds. However, some Native American tribes maintain that the original horses never became extinct and that they have always maintained a kinship relationship with equines. Some scholars suggest that the extinction of horses was as recent as 6,000 years ago and that knowledge of these horses was preserved as “memories” via stories and legends.

Telltale Evidence On Horse Skulls

The horse foal skull in the photo (right) was excavated from the Black’s Fork site, a tributary of the Green River in what is now southwest Wyoming. The skull is dated at about 1650, 30 years before the Pueblo Rebellion, and has several features that suggest it was a domesticated horse. At the base of the skull is an ossified ligament that is characteristic of horses that have been tethered or confined and possibly used for transport. It has a healed fracture where it was kicked by another horse, indicating a level of veterinary care and that it had probably been confined with other horses. Finally, it was buried with three coyote skulls, which suggests that it was interred with ceremony and was clearly valued by the humans who handled it.

The skull of a 9-year-old horse found in a site on Kaw River in Kansas, dated at about 1650, shows that it was likely ridden by Indians who controlled it using a bridle with a Spanish-style curbed metal bit. The Kaw horse had damage to its palate consistent with that caused by curbed bits. It had damage to premolars, osteoarthritis of its jaw joint and “remodeling” of its upper jaw, all of which were likely caused by a metal bit. The Kaw horse, like the Black’s Fork foal, showed deformation of the nuchal ligament at the back of the skull which was likely due to halters or bridles pressing on that connective tissue over time.

Isotope analysis of teeth from the Kaw horse skull suggest the teeth were from an animal that had been moved from a site farther north with predominantly cool-season grass species to a more southerly location with warm-season grasses, and possibly fed supplemental corn. This and other evidence indicate that Indians possessed, herded, used and cared for horses earlier than previously thought.



Skull of the Black’s Fork Foal

Huge Impacts On Tribes

The Comanche gained fame as superb horse-mounted hunters and warriors who were the virtual lords of the southern Plains, and who strongly contested Anglo-Americans expansion into Texas and surrounding areas in the early 1800’s. Less well known is the fact that Comanches were a Shoshonean subgroup that migrated to the southern Plains only a century before (early 1700’s) from southwestern Wyoming. According to the *Science* article, “*the ancestral Comanche had already integrated horse raising, ritual practices and transport into their lifeways at least a full half century before their southward migration, effectively moving to the southern plains as horse herders. Once on the southern plains, the Comanche were able to...*”

...build an empire on horse and bison trade by the middle of the 18th Century CE. By the time Europeans arrived in southwestern Wyoming, the area was already a critical "secondary diffusion center" for horse transmission to Northern Plains groups...the possibility of a rapid, non-European transmission of horses farther northward, including the Columbia Plateau, the Canadian Rockies and the middle- and upper-Missouri regions."

The Black's Fork foal was probably in possession of the ancestral Comanche/Shoshone before their move to the southern plains. The hypothesis about the Comanche role in horse dispersion would provide another century and a plausible mechanism for the still-rapid population growth and dispersal of horses to the Northern Plains tribes. Capture of large herds of horses in the wake of the Pueblo Rebellion may then be viewed as a great windfall that accelerated the process.

How Native Americans first acquired horses remains a mystery. Did some horses escape, become feral and then get recaptured by Indians? The Spanish essentially used the Puebloans as slaves. Were some of them assigned to care for their horse herds and did the Puebloans take a few horses and use them in trade? Did neighboring tribes observe Spanish use of horse, understand how valuable the animals were and simply take some? All of the above as well as other scenarios are possible. However, there probably no single event, such as the Pueblo Rebellion that released huge numbers.

What's It Got To Do With The Vore Site?

One of the main things that makes the Vore Buffalo Jump scientifically and historically important is that it was used in the critical transition period when modern tribes were consolidating, migrating over long distances, trading, vying for territories and incorporating revolutionary technologies (ex. metal tools and other manufactured trade items) and, most important of all, horses, into their cultures.

The changes wrought by the horse were fast and profound. Several tribes, including the Crow, Cheyenne, Arapaho, Lakota, Arikara and Pawnee had previously built their subsistence around growing corn and harvesting other plants, supplemented by a seasonal communal buffalo hunt (jump or pound). They quickly and greatly reduced their dependence on farming in favor of year-round buffalo hunting on horseback when they acquired enough of the fast, powerful steeds to make it possible. Some tribes even bred horses selectively to create their own distinctive breeds (ex. the Appaloosa developed by the Nez Perce in the northwest). These are truly revolutionary changes. Since the beginning, our interpretation at the Vore Buffalo Jump has



been that these transitions were progressing rapidly in the mid-1700's and that horses allowed direct pursuit and hunting possible...making the Vore Site and other buffalo jumps obsolete before 1800.

The new concept of horse dispersal dovetails well with VBJ archaeology and better explains its timing. It is quite possible that

further research at the

Vore site can help provide information on the when, where, what, who and how questions of the Plains Indian transitions in the Black Hills region.

In any case, it is clear that acquisition of horses brought western tribes into a brilliant cultural flowering that lasted a century, then, tragically for them, faded as quickly as quickly as it blossomed.