FIRST DRAFT

BOWS AND ARROWS

NATIONAL GALLERY OF ART, PAUL MELLON COLLECTION

Although he first viewed Native American bison hunts in the late 1820s, George Catlin painted this scene, titled "Buffalo Chase" later in his career, during the 1860s. The tribal affiliation of the hunter is unknown.

Hunting tool 'as important as discovery of fire'

BOB SILBERNAGEL

Like many early visitors to the Great Plains, artist George Catlin was amazed when he witnessed Native Americans hunting bison on horseback, using bows and arrows as weapons.

"The mode in which these Indians kill this noble animal is spirited and thrilling in the extreme," wrote Catlin, who watched bison hunts by many tribes, including the Blackfoot, Crow, Sioux and Comanche. A Native hunter rode "his snorting steed … armed with a simple bow and quiver, to plunge his steed amongst the flying herds of buffaloes, and with his sinewy bow … to drive deep to life's foundation the whizzing arrow."

By the time Catlin saw his first Native bison hunt in the late 1820s, people of the American Southwest and Rocky Mountains had been using bows and arrows for about 1,300 years. And, for 200 years or more, they had been merging that technology with the fleet-footed horses brought by Spanish explorers.

A precise timeframe for the arrival of bows and arrows in this region is impossible to pinpoint. However, archaeologists and historians place the appearance of the new weapon system here sometime from 400 CE to 800 CE. Bows and arrows didn't immediately replace the dart-throwing stick that today we call the atlatl, but they gradually supplanted it.

Bows and arrows may have first appeared in North America about 9,000 years ago along the coast of Alaska. On the other side of the world, they were used at least 13,000 years ago in Africa, based on cave art and archaeological discoveries.

From Africa, the technology soon spread northward, across Europe and Asia, but not to Australia or New Zealand. In Europe, archers developed the famous longbows used by the English, French and Germanic peoples.

Longbows were also used in China, but it was Chinese equestrians who developed the first short, strong recurved bows for use on horseback. Later, Mongolians under Genghis Khan and his heirs used that technology to devastating effect against the ruling Chinese and many other people.

In the American West, it is believed bows and arrows arrived on the northern Great Plains about 2,000 years ago. They may have been brought south and east by people migrating from the northwest, such as the ancestors of the Navajos and Apaches. At the same time, bows and arrows began spreading eastward to the tribes living in the northern forests of this continent.

On the Great Plains, bows and arrows soon began to usurp both atlatls and hand-thrown spears for one important reason: They were more effective for killing bison than the older technologies.

In Wyoming, several buffalo traps — places where Indians trapped bison or drove them over cliffs before killing them with weapons — demonstrate that bows and arrows had quickly become the weapons of choice for Native hunters.

"Some of the oldest arrow points found in Wyoming are from the Wardell Buffalo Trap in the upper Green River drainage, which was used many times over hundreds of years," wrote author Gene Gade. Some arrow points found at Wardell are believed to be 1,600 years old.

"Once it was taken out of the Boreal forests, dispersal of bow-and-arrow technology was rapid, spreading through the Plains as far south as Texas and through the Great Basin about 1,500 years ago," Gade added.

Southwestern archaeologist Paul F. Reed wrote, "In the relatively short span from 400 to 550 (CE), most Pueblo groups across the northern Southwest adopted bow-and-arrow technology." During that time, they were also improving agricultural techniques and beginning to build pit houses.

It is likely that ancestors of the Utes adopted bows and arrows about the same time, although there is little definitive research on this.

There is no question that Native people of the Great Plains and the American Southwest became skilled horseback archers once horses became available to them.

U.S. Army Lieutenant Philip St. George Cooke was astonished watching Comanche horsemen and their use of bows and arrows when his infantry battalion was attacked by Comanches on the Santa Fe Trail in 1829.

"The Indians who dashed by the rear — their left flank exposed to a sharp fire — extended themselves along the right side of their horses, hanging by the left foot and arm," while they "rapidly discharged arrows" from underneath the horse's neck, Cooke wrote. "They seemed the best of horsemen; and rushed up and down places which few persons … would think of attempting."

Utes also demonstrated their abilities with bows and arrows while on horseback.

"Although many Utes possessed firearms before the end of the Mexican period (1848) … bows and arrows remained the most common weapons in warfare," wrote historian Virginia McConnell Simmons. "Even on horseback, a warrior could shoot a number of arrows with precision faster than he could reload and fire a gun."

Many Native women were also skilled equestrians and archers. After an 1837 journey to the Northern Plains, artist Alfred Jacob Miller painted a stirring scene called "Indian Female Running a Buffalo," depicting a Shoshone woman drawing her bow to shoot a buffalo while riding at full gallop.

Bows and arrows were made of a variety of materials, but wood was the primary one. Osage orange, yew, hickory and ash were among the most common woods used, while flint, obsidian, copper, and later, scavenged metal were used for arrow points.

Near today's Wind River Reservation in Central Wyoming, wood such as chokecherry, cedar and willows were used for bow material. Meanwhile, the Mountain Shoshones, who lived at higher altitudes, became adept at making bows from animal horns.

Indians of the West developed techniques for reinforcing the wood, using sinew from the tendons of large animals adhered to the back of the bow, probably with glue made from animal parts. Additional sinew was often wrapped around the bow to hold it all together. Sinew backing increased the strength and power of the bow.

According to the National Park Service, Cheyenne Indians made arrows from the shoots of the cherry or currant. Some used red-willow. Arrow-makers cut the shoots to a length that they carefully measured. However, each individual arrow maker determined how long his or her arrows would be. After the arrows were dried, they were straightened by running them through horns or bones with small holes drilled in them.

Bowstrings were usually made of sinews or rawhide, but they had to be repeatedly restretched as the rawhide would lengthen over time or if it got wet.

No matter what materials they used to construct their bows and arrows, there can be no doubt that Native American culture in the West was transformed by the new technology. As author Larry Smolucha put it, the development of the new weapons system is thought by some anthropologists to be a cultural development "as important as the discovery of fire."

Sources: "The Momentous Arrival of the Bow and Arrow," by Gene Gade, Vore Buffalo Jump Foundation, www.vorebuffalojump.org; "Zing! Bow-and-Arrow Technology in the Ancient Pueblo Southwest," by Paul F. Reed, www.archaeologysouthwest.org; "Ethnology of Rocky Mountain National Park: The Ute and Arapaho," National Park Service Publications, https://npshistory.com/series/berkeley/beals3/beals3f.htm; "Bow and Arrow Spread into North America," by Larry Smolucha, at Ebsco Research, www.ebsco.com/research-starters/history/bow-and-arrow-spread-north-america.com;

Bob Silbernagel's email is bobsilbernagel@gmail.com.

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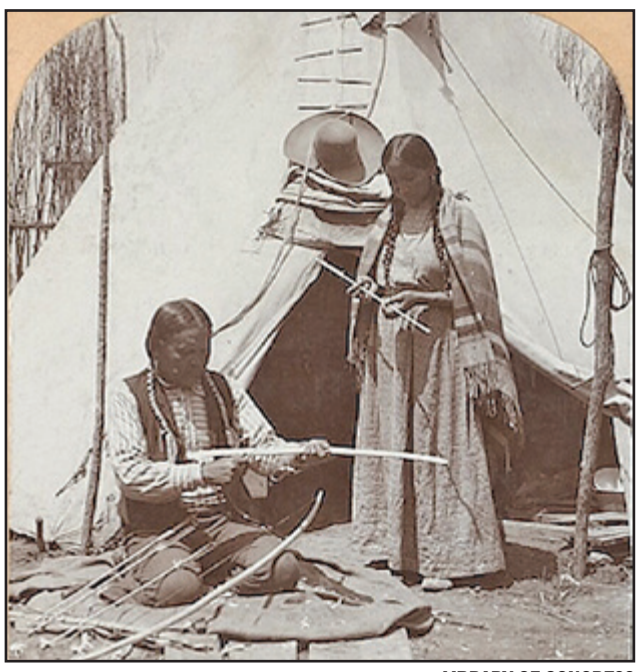
Famed photographer Edward Curtis took this posed photo of a Crow (Apsaroke) warrior in 1908.



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This Native man demonstrated how he made arrows at the 1904 World's Fair in St. Louis. William Herman Rau took the photo.