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1980 Mass Grave at Crow Creek in South Dakota Reveals How Indians Massacred Indians in 14th Century Attack. *Smithsonian* 11(6):100-109.

Please be aware that this article was published in 1980. All Ancestors were reburied on the site in 1981 according to the wishes of their descendants as well as the current residents of the Crow Creek Sioux Reservation. You should also be aware that the article shows human remains that may cause distress to some people. At the time this article was published, elders of the Arikara nation gave permission to use the images as we saw fit, but only for educational purposes. Current views may have changed. Well before the World Wide Web and more recently, others have made and distributed many of the images. The images of remains in this article on academia.edu have been blurred to meet the World Archaeological Congress Tamaki Makau-rau Accord on the Display of Human Remains and Sacred Objects (<https://worldarch.org/code-of-ethics/>). Any images in the scientific articles produced for the project will remain intact. If you now choose to see the original images, you can probably find unblurred images elsewhere, perhaps in your public library or on the web somewhere. We ask that you view and treat these materials with respect.

The Vikings are coming
These arm and neck rings
are from Scandinavian hoard
in a new exhibition (p. 60)

By Larry J. Zimmerman
and Richard G. Whitten

Prehistoric bones tell a grilling tale of Indian v. Indian

*South Dakota archaeologists find what may be
North America's largest ancient massacre site;
overpopulation might have triggered the strife*

The time is dawn in the fall of 1325. There is ominous movement beyond the protective stockade that surrounds a village high on a bluff above the Missouri River. Enemy warriors are gathering. They creep toward the village with the rising sun at their backs.

Inside the barrier, dogs have begun to bark. Asleep in their earth lodges, people stir beneath warm buffalo robes; fall harvesting is finished and their muscles ache from laboring in the fields and digging storage pits in the lodges. Corn, beans, sunflowers and squash were not as abundant in the river-valley garden plots this year. The work has been hard for little return. Along a newly dug fortification ditch, the men have been building a stockade wall; it is not yet completed. A watchman dozes, fog covers the ground, the dogs bark louder-and the attack begins.

Arrows, stones, lances and fire plummet onto the lodges. Gaps in the unfinished stockade are breached and screaming warriors pour through. The villagers rally and fight back, but it is too late. Their lodges are burning; combat is already hand-to-hand and the attackers are everywhere at once.

The raid is quickly over. Many are dead. Dismembered and scalped victims lie scattered throughout the charred rubble. Scavengers-wolves, village dogs and coyotes-will soon be feeding on the bodies. Many young women and children have been taken captive. For the marauders it is a great victory; for the villagers a disaster. The fortunate few who are left will never live there again.



Dismembered remains of 500 14th-century Missouri Valley farmers-men, women, children-lie exposed

Sometime later, when it is safe, a handful of survivors straggle back to look after their dead. They carry the battered remains of friends and family down into part of the open ditch (p.106). There they carefully cover a mass grave with fresh soil to keep the predators away. They speak the proper words softly and quickly, sing hushed songs and put the spirits to rest. The grieving people swear revenge, then disperse to relatives in other communities along the riverbank, vowing that this terrible deed will never be forgotten and can never be forgiven.



15 feet below ground at Crow Creek village. The hole to the left of the bone pile was gouged by a looter.

The time is midday in the spring of 1978. The place is called "39BF1 I" by South Dakota's state archaeologist, Robert Alex-39 stands for the state, BF for Buffalo County and 11 means it is site number 11 in the county. On this Memorial Day weekend, members of the South Dakota Archaeological Society are touring important sites in the region and have arrived at the prehistoric village of Crow Creek.

Bob Alex reviews the history of the area. Part of this village was excavated in the 1950s by Marvin E Kivett of the Nebraska State Historical Society, who worked

with a crew from the Crow Creek Sioux Indian Reservation where it is located. At that time, they uncovered many earth lodges and found evidence of fire and abandonment, but few human bones. (Twenty years later, historians in North Dakota set fire to a full-sized simulated earth lodge (p. 105) as an experiment; archaeologists who were continuing the Crow Creek excavations examined the results for clues that might help them recognize authentic burned-out lodges.) Kivett identified the village as part of the Initial Coalescent culture that existed from about AD. 900 to

Indian grave: remnant of a massacre

1400. This culture was formed when corn farmers—the Central Plains people of what is now Kansas, Nebraska and Oklahoma—were forced by droughts to move up the river valleys northward into the Dakotas. There the Initial Middle Missouri culture was already established along the Missouri River. The two cultures blended, or coalesced. Large, fortified communities were typical of the period; the people were sedentary farmers. Today, their descendants are believed to be the Arikara Indians in North Dakota.

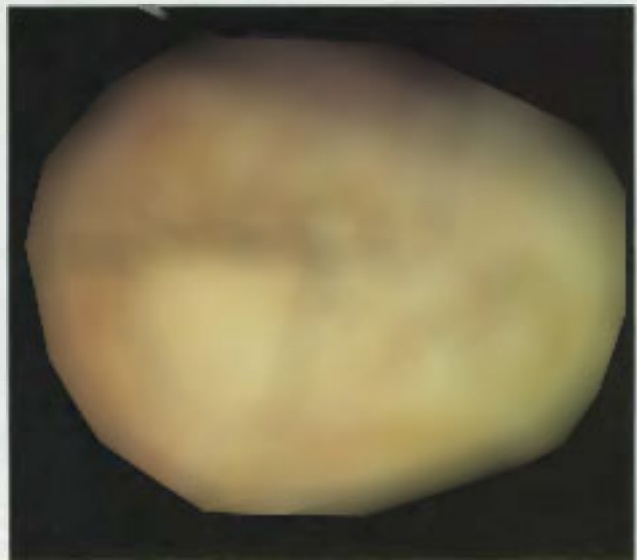
As Alex leads the visitors around the site, stepping among remains of fortification ditches and earth lodges, there is one feature of the village that he fails to mention—because no one yet suspects it: Crow Creek was the scene of the horrendous 14th-century massacre that pitted Indian against Indian. But the Sioux tribes that now live in this part of the state, along with people of European descent whose ancestors migrated here some five generations ago, are not related to the victims or the perpetrators of that disaster. And these modern residents have their own everyday concerns; the "terrible deed" may never have been forgiven, but it has surely been forgotten.

The touring archaeologists observe how dramatically the area has changed in some 600 years. The Missouri River has been tamed: where once Indian villagers farmed, motorboats now cruise on man-made Lake Francis Case. The fluctuating water levels of the lake have caused heavy erosion in the shoreline prairie bluffs and, year by year, the ancient village has been slowly crumbling away and disappearing into the water. A fortification ditch or dry moat has recently slumped away. One curious member of the group

The authors, members of the anthropology program at the University of South Dakota, helped to excavate and interpret Crow Creek's site and bones.



Using a grapefruit knife to scrape soil from bones, researcher exposes the top layer of the yard-deep pile.



Raised bone lesions (lower right) in skull show victim survived scalping long before his murder.

strolls over to the bluff for a closer look. Glancing down, he notices some bones sticking out of the embankment and calls Alex over to see. Alex and Steve Ruple from the state Historic Preservation Center identify the bones as human. Within days they alert the Omaha District of the U.S. Army Corps of Engineers to the discovery; the Corps has jurisdiction over the lake, which is a reservoir. Plans are made to prevent further erosion by placing rock and other material on the bank. The Corps soon calls on us at the University of South Dakota Archaeology Laboratory



Archaeology crew examines the pit dug by looter in the eroded bluff; bones are to right of man in red.



The small dark holes-pitting-visible in eyesockets of this skull were caused by dietary deficiencies.

(USDAL) to remove the bones so that stabilization of the site can begin, but it will be another month before we start that excavation.

During the intervening weeks, a near-calamity occurs at Crow Creek, long a favorite haunt of arrowhead collectors. Most collectors are thoughtful hobbyists who are fascinated by and have great respect for North America's cultural heritage. Some, however, get carried away and, in violation of federal law and good sense, cause enormous damage to archaeological sites. We have a name for them: looters. Before our USDAL

crew can get to the exposed bones, the lakeshore cruising of one looter pays off: he spies the same bones that the visiting archaeologists had seen. With pickax and shovel in hand, he scrambles up the embankment and begins to gouge a hole (left). Bone, bone and more bone spew out, but no arrowheads. Finally he leaves for his boat, bewildered by the abundance of bone and lack of stone. By sheer accident he has gouged out the first traces of what we later realize is possibly the largest mass burial ever found in North America, a bed of bones that bear macabre witness to the Crow Creek massacre in which more than 500 men, women and children died.

In the looter's wake, an SOS

When word of the looter's activities reach the Corps, an emergency salvage excavation is immediately authorized to prevent further destruction. The Sioux tribal council promptly gives its approval. The Corps sends an SOS to the USDAL and, under field supervisor Thomas Emerson, we begin work in August. None of us expects more than a few weeks of exploration, with the discovery of perhaps a dozen burials. We are wrong.

We first dig a trench at the bluff's edge by shoveling through 12 feet of loess, unstratified soil carried and deposited over the years by strong, constant winds. We want to uncover the bones from the top so that we can study soil changes as we dig. We intend to leave the bones in place for photography and drawing. When we reach the bone bed, we see what a mammoth job lies ahead. We enlarge the excavation and then enlarge it again. The final dimensions are almost 25 feet by more than 12 feet. The floor of the pit-the old ditch-is 12 to 15 feet below ground level.

As we slowly clear the reddish-brown loess away from the bones, we run into problems: when the gusty wind blows, which is all the time, the loess dust flies up and covers everything and everyone. Our sandwiches get crunchy and we have trouble breathing. Eventually we try wearing painter's masks, but they clog and we junk them. In the hot sun-100 degrees F is normal for August and early September-we have to carefully chip the cementlike loess away from the bones to prevent cracking and breaking.

Our crew includes an exchange-program archaeologist from Norway and some undergraduate anthropology majors, as well as five Sioux. To provide security for the site, we live right there in tents, or try to. The winds are so strong that, with the aid and abetting of rain and hailstorms, the tents are soon shredded and blown down. The Sioux know something that we do not and wisely choose to erect their own tepee (p-104), which is very stable and stands firm.



Close by a traditional, wind-resistant tepee, a Sioux holy man assembled framework of his sweat lodge.

Working seven days a week, by mid-October we have uncovered most of the bone bed and can see the massacre victims heaped in a fan-shaped pile (pp.100-101). Along the north wall, the deposit runs more than 20 feet; at its widest, the fan spreads out to almost 18 feet. At the deepest point, there are some three solid feet of human bone. With dental picks, paintbrushes, sharpened popsicle sticks and grapefruit knives, we clear and remove each bone. We also get used to working in cramped positions. The mass of bones is an enormous, confused jigsaw puzzle. No entire skeletons are present, just parts-odd pieces jumbled together. Each fragment is photographed in place, separated out, labeled with a site number and provenance and removed to the USDAL for analysis. We keep articulations—two or more bones found connected to each other, hence part of the same individual—together. In the lab, many more articulations are reconstructed.

News of the excavation spreads fast. People begin visiting and, by late fall, busloads of schoolchildren descend upon us. One crew member spends his days acting as interpreter and guide. We worry about future security. Even if we work until early December, which we do, we will have to leave some of the bones uncovered and in place. What might happen when we go? The Corps solves the problem by filling in the site and capping it with concrete, its condition today. The reservation's Bureau of Indian Affairs police force guards it around the clock. The Corps and the Sioux tribal council have requested a change in status for the



Artist George Catlin painted this *Interior of a Mandan Lodge from life in 1832-33*. Archaeologists believe

site from National Landmark to National Monument to assure additional protection and study.

The present-day Crow Creek residents are Sioux whose ancestors moved into the area in the 1700s. Those Plains dwellers came astride horses as nomadic tribesmen, with a far different life-style from the valley farming folk. Nevertheless, as we continue to excavate, many people on the reservation take a real interest and treat us to some delicious picnics.

Considerable debate, occasionally heated, develops over the treatment of the bones. The Corps acts with admirable patience and diplomacy and eventually the Sioux, the Corps and the archaeologists reach an agreement. A major concern of the Sioux Indians is whether our excavation crew is taking appropriate care of and



that this lodge is similar to those in which about 1,200 villagers were asleep when the enemy attack began.

showing the necessary respect for those who had died. Some of the more traditional Sioux feel that the *wanagi* (airborne and sometimes malevolent spirits who guard the remains of the dead and are audible in cemeteries) are causing problems among the living on the reservation. Are we, by our excavations, disturbing spirits better left alone?

One noontime, when our entire crew hears an eerie, high-pitched wail, we, too, begin to wonder about the *wanagi*. We decide to ask a Sioux holy man, Bill Schweigman from Rosebud Reservation, to visit and explore the supernatural world of Crow Creek. On arrival, he immediately starts building the essential sweat lodge (opposite) within which he will undergo ritual sweating during his nocturnal vigil. He gener-



Simulated earth lodge in North Dakota was set afire by historians to help them see effects of burning.

ates intense, steamy heat in the canvas-covered hut by pouring water on hot stones. Chanting and singing, he becomes entranced during the night and communicates with the spiritual world. He determines that proper rituals had been held long ago. The dead are at rest, the bones merely bones; we may continue.

We come to understand that we have no right to keep these bones permanently at the university. We promise, with Corps assistance, to see them properly reburied on the reservation. But reburial means that time for analysis of the bones is limited and we still have many questions to ask the dead. Ours is a unique opportunity to study the health, diet and culture of 14th-century Missouri Valley farmers. Demographic analysis is done by P. Willey of the University of Tennessee and Mark Swegle from Indiana University, while Dr. John Gregg of the University of South Dakota Medical School analyzes bone pathology.

The bone studies tell us a great deal about the victims. Among the remains of 486 people, women from 12 to 19 years of age were notably scarce, as were very young children of both sexes. They were probably taken captive to be absorbed into the villages of the victors. Although the looter had hacked apart 44 skeletons in his search for arrowheads, we are able to identify many of the separated, damaged bones that we recovered from the grave (our estimate is that approximately 50 more people remain buried). We rarely find hand and foot bones. Analysis, counts and cut marks on arm and leg bones confirm this, suggesting

Indian grave: remnant of a massacre



Scenes on these pages were painted for South Dakota Public Television documentary. Above, scavengers move in after autumn snow; below, burial in the ditch.



that hands and feet had been severed for trophies. Scalping marks appear on most craniums. These are long cuts made with a sharp stone knife in the process of removing the scalp lock at the hairline. Scalps have been known from historic times as a type of war prize, but our evidence shows that scalping has a long pre-history on the Plains. One poor fellow had been scalped some time before the massacre: his skull shows signs of healing (p. 102). This time he did not survive.

The bodies were dismembered. Many long bones bear "butchering marks" where the bone was cut through and broken at the joints. Other marks show that carnivores like village dogs or coyotes must have gnawed on the remains before burial (left).

Bone is living tissue and reacts to breaks and to many problems of soft tissue as well. By comparing the frequencies of disease, accident and dietary deficiencies in the Crow Creek population with pathologies in our own day, Dr. Gregg obtains data on the relative health of these farmers. A total of 1,137 incidents of abnormality are identified. Bone cancer is virtually nonexistent. Arthritis is evident but rare.

Well-worn teeth and broken bones

Among dental diseases, few cavities appear. Teeth are well-worn, however, suggesting a diet high in inorganic grit, believed to be the result of grinding flour in stone querns. Grit from the querns permeated the flour, but our own experience with gritty food makes us suspect that the ubiquitous loess was the culprit. Some malformed jaws are found. This seems to be a common trait among people who soften animal hides by chewing them. And there is a high incidence of breaks, perhaps from having to clamber daily down the steep bluff to the garden plots below.

That the people were cooperative, at least among themselves, can be seen in the number of handicapped and crippled residents. One man has a fused radius and ulna in his right arm that must have limited his usefulness in the village. A child of about seven has dislocated his hip; in time a new socket grew, but it was probably painful for him to walk.

Examination of the craniums and X rays of such long bones as the tibia disclose some potentially important findings. In many eye sockets there is a noticeable pitting, *cribra orbitalia* (p. 103), and one skull had another kind of pitting, *porotic hyperostosis*. The long bones show minute longitudinal striations and growth-arrest lines. Separately these anomalies would only be suggestive. Together, they paint a sad picture of infection and vitamin and protein deficiencies.

What caused the slaughter at Crow Creek? Was it simply a manifestation of an aggressive, warlike culture? Historically the Plains tribes, pressured by ad-

vancing European settlers, were aggressive and excellent fighters. But before the use of horses on the Plains, feuding was limited. Small ambushes in the countryside were the rule among pedestrian farmers and hunters. When battles were fought, they were prearranged and extremely formal affairs with little loss of life. Honor was achieved by counting "coups"-blows or touches: a warrior would touch, not kill, his foe.

Little in the ethnographic records of the Plains prepared us for the massacre at Crow Creek. Maybe occasional, or chronic, malnutrition was a contributing factor. Perhaps the Missouri River floodplain and terraces of the 1300s were overpopulated, with too many people in too many villages putting heavy demands on the kitchen gardens. Everyone ate, but each person's share was minimal; as the villages grew, that share became even smaller. An extended drought could have tipped the balance and caused a precipitous decline in

living standards. We know that such droughts were common on the Plains between the 12th and 15th centuries. This bloodletting may have been more than just an object lesson or simple revenge for an insult; it may represent the worst and most extreme kind of population control. The victors captured all kinds of trophies and the next day likely took possession of the abandoned farmland.

Months from now when the massacre victims are reburied, their new grave marker will stand as a mute symbol to a people whose neighbors probably saw their own standard of living in decline and took action to reduce the competition for food. It was not the only culture in history willing to go to war to ensure adequate resources. The marker will also serve to moderate the idealized view of prehistoric cultures-Rousseau's "noble savage." The nature of warfare and the conditions that trigger it seem unchanged today.

In this artist's conception of the dawn raid, by Martin Wanserski, one earth lodge has already been

set afire as the villagers stream out to meet their enemies, who attack across the ditch at upper right.

