Drawing of Blackfoot Chief courtesy of Susan Tine

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"A PURELY LITERARY EXPEDITION": THE DEATH OF SERGEANT CHARLES FLOYD AS PERCEIVED BY CAPTAINS LEWIS AND CLARK

by
Mark B. Hamilton

The Death of Sergeant Charles Floyd

Sergeant Charles Floyd's death on August 20, 1804, was one of several crisis situations for the Lewis and Clark Expedition. It demonstrated both the dangers of this rigorously demanding Voyage of Discovery and the responsible integrity of its two capable leaders. Three men were to lose their lives during the course of this exploration of the then newly acquired Louisiana Territory: the first, Sergeant Charles Floyd, was to die a hard death in 1804 along the Lower Missouri River near present day Sioux City, Iowa, while the second and third–two Piegan warriors—were to be killed on July 27, 1806, near present day Cut Bank, Montana in the southern part of what is now the Blackfeet Indian Reservation. The first of these deaths will be the concern of this essay.

The 20th Century medical explanation, explicated by Eldon G. Chuinard, M.D., in *Only One Man Died: The Medical Aspects of the Lewis and Clark Expedition* (1979), posits that Sergeant Charles Floyd probably died from a perforated appendix and the subsequent massive abdominal infection, peritonitis. This diagnosis remains basically unchallenged by history scholars, and perhaps rightfully so, although a different diagnosis is certainly possible.[1] At the time, however, his sickness was known and described merely as an extreme *Bilious Cholic*. "19th Century diagnoses were often grossly imprecise by modern standards," and treatments for severe abdominal symptoms were still based upon this generalized term, Bilious Cholic, used categorically for

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most undifferentiated abdominal and intestinal disorders.[2]

Health for anyone, and especially for a soldier, was tenuous in 1800. Most diseases were misunderstood at best and the medical profession was still relying upon bleeding and purging. Surgery was not an option. Ailments of the soldier were many, from infections to food poisoning, from endemic diseases attributed to bad water, to camp fevers attributed to swamp air. For all similar health threats, treatment in the military was quite simple: move the camp, keep on the march, or rid the body of sickness with purging and bleeding, alleviating the pain with laudanum. Everything from typhoid to food poisoning would have been treated the same.

What remains of real consequence, however, for an understanding of Floyd's death is that "The diagnosis of appendicitis, ... is one which would not have entered the minds of Lewis and Clark."[3] In fact, "The ailment was not even recognized by medical science until twenty years after the expedition, ... [while] the first successful surgical treatment [came] in 1884."[4]

Without a precise diagnosis beyond "a violent colick,"[5] Floyd's sudden death would be a mystery, attributable to three other possibly dangerous causes: 1) endemic disease, 2) poisoning from river water, or 3) a Native American war coup by poisoning. As excellent military leaders, responsible for the health of their men, they would consider each of these possible causes in turn.

Their Immediate Situation: August 19, 1804

After three months of hard toil, towing heavily laden boats upstream along the Lower Missouri River from Camp Dubois, the now resting and recuperating expedition members were just south of present day Sioux City, Iowa. Captains Lewis and Clark had counciled, for the second time, with chiefs and warriors of the Missouria and Oto nations, linguistic relatives of the Omaha. They exchanged gifts and speeches. Lewis and Clark advised them again of the United States' recent acquisition of these lands known as the Louisiana Territory. One Oto brave, Very Big Eyes, was dissatisfied with the advice and the government certificates that ushered the tribes into the protective shadow of these new "Fathers" from

Washington, D.C. He refused the certificate, offended Lewis and Clark, and only by the intervention of Chief Little Thief did he finally agree to accept it. At which time, Lewis and Clark declined to return it to Very Big Eyes, and "rebuked them verry roughly for haveing in object goods and not peace with their neighbours."[6] Eventually the certificate was given to Little Thief, who, desiring it to be given to the one most worthy, returned it to Very Big Eyes, after an excuse was received.

The Captains then attempted to break up the council with a dram of whiskey given to all. But the Otos and Missourias cajoled Lewis and Clark until the meeting extended into the night with more whiskey, the showing of curiosities (like the air gun), and more socializing, perhaps with Cruzat's fiddle. Very shortly thereafter, Sergeant Charles Floyd, a most trusted non-commissioned officer, fell grievously ill while on guard duty. He would die approximately fourteen to sixteen hours later, expelling his bodily fluids in an attempt to rid himself of some kind of poisoning.

[Clark] August 19th 1804 [Late Evening, estimated 11pm]

> we then gave them a Dram & broke up the Council, the Chiefs requested we would not leave them this evening. we drturmed to Set out early in the morning we Showed them many Curiosities and the air gun which they were much asstonished at. those people beged much for wishey–Sergeant Floyd is taken verry bad all at onc with a Beliose Chorlick we attempt to relieve him without Success as yet, he gets wordse and we are muc allarmed at his Situation, all attention to him.[7]

[Clark] August 20th 1804 [Morning, estimated 6am]

> Sergeant Floyd much weaker and no better. Made Mr. Fauforn the interpter a fiew presents, and the Indians a Canister of whisky we Set Sergeant Floyd as bad as he can be no pulse & nothing will Stay a Moment on his Stomach or bowels–...

There had been some sickness, especially boils, diarrhea, and heat

fatigue, among the men as early as late July. Sergeant Floyd had also been intermittently sick, but no one had recorded this as being serious. Thus, the sudden symptoms were alarming. Recognized as Bilious Cholic, his ailment was treated according to the best medical practice. It was to be purged and bled, his fever soothed by a warm bath, the pain decreased with opiates. Captain Clark and York stayed the entire night attending to this favored Sergeant who was vomiting, sweating, and experiencing renal and bowel dysfunction. Yet to no avail. He got no better.

As a primary military precaution for avoiding endemic disease, the expedition left their encampment early on the morning of August 20th, bringing with them a very ill Sergeant, now probably close to shock. Six or eight hours later he would be dead.

> [Clark] August 20th 1804 [Afternoon, estimated 2pm]
>
> Serj.' Floyd Died with a great deel of Composure, before his death he Said to me, "I am going away" ["]I want you to write me a letter"– We buried him on the top of the bluff 1/2 Miles below a Small river to which we Gave his name, he was buried with the Honors of Warmuch lamented; a Seeder post with the (1) Name Sergt. C. Floyd died here 20th of August 1804 was fixed at the head of his grave–.....[8]

Occurring so suddenly, Sergeant Floyd's death would have prompted them to consider not only endemic disease and sickness of the air, but also poisoning from the Missouri River water itself, and possibly the threat of a Native American war exploit, or coup by poisoning.

Time to Reflect: August 20, 1804

Biliose Chorlick was a term used categorically in 1800 for unnamed and unexplained sicknesses, diseases such as cholera, yellow fever, jaundice, the plague, dysentery, and to some extent malaria and scarlet fever. Unexplained epidemics occurred in both towns and camps; they receded and recurred in both the white and red populations, like those of

yellow fever in Philadelphia from 1793 through 1799.[9] These unfathomable sicknesses came with the summer and left with the frost. Little could be done except to get away from the "bad air" and the "swamp fog." The strategy therefore was one of avoidance, seasonal migration or, in this instance, as a military expedition to just keep moving.

In the sweltering summer heat and humidity along the Lower Missouri, health had become a concern by mid-July: "the men is all Sick" "much fategeued" echoes from Sergeant Floyd's journal culminating with his entry of July 31st "I am verry Sick and Has ben for Somtime but have Recoverd my helth again."[10] Captain Clark, who conscientiously kept record of sick-call, does not mention this, indicating that Sergeant Floyd's illness was not considered extremely serious, or any more so than that for the other expedition members. Nothing out of the ordinary had thus far hindered their progress, except for these expected aches and pains, the discomforts from skin inflammations, especially boils, and probably diarrhea brought on by sour meat and ill tasting water.[11]

It is interesting to note, however, how often Lewis and Clark do mention fog and moisture, tumors and mosquitoes, and the effects of the humid August heat as they toiled along week after week. Predictably, maladies were brought on by these conditions, by the poor diet, and by the strenuous activity of poling, paddling and cordelling their boats upriver.

As the expedition ascended past the confluence of the Little Sioux River,[12] suspicions arose concerning the bitter alkaline river waters that seemed to be causing daily sicknesses. For this entire stretch of the Missouri, from the Little Sioux River to the Big Sioux River, the water was extraordinarily hard with these alkaline salts leeching out from the banks. The daily sickness caused by this brew on the surface of the river would be quickly remedied on August 21st, the day after Floyd's death, by "agitating and dispersing the top layer so that water might be drawn from some depth."[13]

On the following day, August 22nd, Captain Lewis would begin his inquiry, investigating minerals along the banks of the Missouri by enthusiastically field-testing for both arsenic and cobalt. Geological field tests of the age required the grinding and igniting of elemental rocks for

identification, arsenic having a "garlic odor when burned."[14]

Captain Clark wrote, "Capt. lewis was near being Poisened by the Smell in pounding this Substance I belv to be arsenic or Cobalt"[15] And again he wrote, "Capt. Lewis in proveing the quality of those minerals was near poisoning himself by the fumes & tast of the Cobalt which had the appearance of Soft Isonglass–.... Capt. Lewis took a Dost of Salts to work off the effects of the Arsenic,...."[16]

Curiously, as supported by Dr. Gary Moulton, this is the only time within their entire *Journals* that the word "Arsenic" is ever used.[17]

A Context of Anxiety:

Their expedition was just getting underway. Only 550 miles from Camp Dubois, no accidents had yet occurred,[18] and all boded well as they traveled through the territory of the Omaha, Oto, and Missouria tribes. Yet within three weeks, from August 3rd to August 24th, events demonstrated the tenuous circumstances within which the expedition traveled.

After Lewis and Clark first counciled with members of the Oto and Missouria tribes on August 3rd, without warning two men deserted. La Liberte, an engage or river boatman, failed to return from the Oto on the 3rd, and would deceive and elude his captors. Moses B. Reed, an enlisted man deserting on the 4th, possibly to join La Liberte, would be subsequently caught and returned to the expedition for court martial on August 17th.

During George Dweyer's hunt for Moses Reed, the expedition kept ascending the Missouri until it stopped to rest and regroup about three miles from a main Omaha village, which they hoped to contact. The Captains were well aware of the smallpox epidemic that had decimated much of the Omaha nation at this location four years earlier–diminishing the tribe that had ruled this part of the Lower Missouri, led by its notable and infamous Chief Blackbird.[19] In fact, it was Chief Blackbird's grave mound that overlooked, from three hundred feet, this 60-70 mile stretch of Missouri River. And it was from his grave mound's cedar pole that the two Captains, on August 11th, "fixed a white flage bound with red Blue & white"[20] as they proclaimed American ownership to this part of the

Louisiana Territory.

Moses B. Reed, tracked down and brought back to camp, was subsequently tried and punished in the afternoon of August 18th. Four Oto chiefs and five warriors accompanied the returning detachment. Found guilty of desertion, Reed was sentenced to run the gauntlet four times and was no longer considered a member of the expedition. Both Otos and Missourias petitioned on Reed's behalf, but Lewis and Clark were convinced of the punishment's propriety. That night, until late, Lewis and Clark conferred with the Indians and celebrated Captain Lewis's thirtieth birthday.

The following morning, on August 19th, gifts were prepared for the Oto chiefs; speeches were made and heard until late in the day. However, Captain Clark would narrate that "Those people were not well Satisfied with the Presents given them, [and] ...became extreemly troublesom to us begging Whisky & little articles."[21] This was the second council, which progressed with whiskey and curiosities beyond the expectations of the Captains, ending late in the evening, probably around 11 p.m. It was then that Captain Clark continues his journal entry for August 19th with a startling statement, "Sergt. Floyd was taken violently bad with the Beliose Cholick and is dangerously ill we attempt in Vain to releive him, I am much concerned for his Situation–."[22]

This culmination to the strangely raucous council is troubling, since these tribes are associated with the infamous delays and robbings of traders by their relatives, the Omaha and Chief Blackbird. Yet Sergeant Gass, in his journal, reports "On the 19th a council was held with these Indians, who appeared to wish to make peace with all nations. This day Sergeant Floyd became very sick and remained so all night. He was seized with a complaint somewhat like a violent colick."[23] Perhaps Sergeant Floyd had just taken his duty station on a sandbar near the river when he fell prostrate, exhausted, sweating, and cramped.[24] Captain Clark and York administered to him all through that night and the following day, until his death.

Any suspicions of "Indian treachery," as it was called, would have been substantiated by the great amount of knowledge gained during their previous winter while in St. Louis and from the earlier journals of other river travelers, such as Trudeau, MacKay and Evans. The Captains knew

that these tribes were notorious for detaining white traders. The two desertions had threatened unity, creating a sense of vulnerability; the disruption at the council by Very Big Eyes [Big Blue Eyes][25] had jeopardized loyalties, adding to the uncertainty of that less than satisfactory council. And now, a most trusted Sergeant had died, suddenly and mysteriously.

The Native American Geography

The native peoples, whose land was being claimed by the non-negotiable diplomacy of Lewis and Clark, were warrior nations. One of the expedition's main duties as prescribed by President Jefferson was to determine Indian populations, cultures, vocabularies and tendencies; to reconnoiter; and to assess for both commerce and safety. During the previous winter, in and around St. Louis, the Captains had learned much about these Missouri tribes, evidenced by their detailed knowledge from materials and maps gathered from Mackay and Evans.[26]

Furthermore, as military men, they understood the warrior way of the Native American brave societies, and would be aware of the deceptions, the misdirection, and the cunning associated with the war coup and the war exploit. Such was the way of courage and mystery from the Eastern Seaboard to the Missouri basin. And such was the feasibility of a coup by poisoning by those chiefs and warriors of the Oto and Missouria tribes, relatives of the Omaha.

The Omaha, Oto, and Missouria Tribes:

For over two hundred years, the white migration westward had created many problems and a vast anxiety in the minds and hearts of Native America. In the St. Lawrence-Great Lakes region "...plague, [and] smallpox [was] becoming endemic...by the mid-seventeenth century."[27] To the Native American it seemed that the Spirit of the world had forsaken them. The harmonious connections to their Mother, the earth, were broken. Sickness predominated, and only by extreme measures could they maintain a balance with the quickly changing, destructive world, which seemed to accompany the whiteman.

> ...For the Indian, as far as the name of white man has traveled and long before he has to try his strength with him, [he] is trembling with fright and fear of his approach. He hears of white man's arts and artifice, his tricks and his cunning, and his hundred instruments of death and destruction..., his heart sickens ... at the thought of contending with an enemy whom he thinks may war and destroy with weapons of medicine or mystery.[28]

Fur trappers and traders, who made contact with these tribes, used these fears of mysteries and sickness as threats to manipulate them.[29]

In the mid 1700s the French were trading for furs along the Lake-of-the-Woods to as far south as the Oto and the Omaha, Eastern Nebraska and St. Louis. These two tribes, although traditional enemies, had in ancient times migrated together from the Great Lakes area (possibly from what is now Minnesota), originating from a single lineage.[30] Split into two main nations as they entered the Mississippi basin, they inhabited the region along the Platte and Missouri Rivers. [See Appendix 1]

The Use of Poison by Native Americans:

The use of poisons in rites and ceremonies by Native Americans was similar to that of other societies: the Egyptians, the Romans, and the Elizabethans. As aboriginal peoples, they tried to know and make use of all natural substances: snakes, berries, herbs, roots, barks and minerals. Everything had a purpose. Each could do harm or good. Native American animism required a thorough knowledge and understanding of the natural world, as requisite as air to breathe or water to drink. It is not surprising, then, that various poisons were known and used as part of their tribal practices.

The primary ceremonies of the Omaha often were those associated with the Origin Pole, symbolizing the life of the tribe, the individual, but most importantly the Spiritual authority, which gave the tribe its place within the cosmos. In ancient times, this had been a gift from the Thunder Beings in the form of a sacred cedar pole from a burning tree.[31] In its most complete conception it represented

> ... the same life-force of which they were conscious within themselves; a force that gave to the rocks and hills their stable, unchanging character; to every living thing on land or water the power of growth and of movement; to man the ability to think, to will and to bring to pass. This universal and permeating life-force was always thought of as sacred, powerful, like a god.[32]

This could be thrown out of balance, however, and there were consequences for the misuse, corruption, or disrespect shown to these sacred ways of unity and wholeness. For instance, from ancient time the chief's authority and the social order were governed by the following punitive practice:

> Within the Tent Sacred to War was kept a staff of ironwood, one end of which was rough, as if broken. On this splintered end poison was put [from a rattlesnake?]....As men's bodies were usually naked, it was not difficult when near a person in a crowd to prod him with the staff...which is said always to have resulted in death....The punishment was decided on by the Council of Seven Chiefs, which designated a trustworthy man to apply the staff to the offender. Sometimes the man was given a chance for his life by having his horses struck and poisoned.[33]

Chief Blackbird Of The Omaha (17??--1800):

Lewis and Clark called Blackbird not Chief but King. On August 11, 1804, Lewis and Clark stopped at Blackbird's grave mound, and Clark would write:

> ...we landed at the foot of the hill on which Black Bird The late King of the mahar [Omaha] who Died 4 years ago & 400 of his nation with the smallpox was buried...the Grave which was about 12 foot Base & circueller, on the top of a Penical about 300 foot above the water of the river, from the top of this hill may be Seen the bends and meanderings of the river for 60 or 70 miles round...a Creek Called Wau-Con di peche C or Bad God Creek

> of bad Spirits on the L.S. above the Bluff on this Creek the Mahars [Omahas] had the Small pox....[34]

The Captains had learned much from their stay in St. Louis concerning the Indian nations along the Missouri, including this Chief of the Omaha. Blackbird had been a tremendously powerful and infamous leader, and had remained a legend. Accounts of him in the late eighteenth and early nineteenth century Missouri River travel journals of Mackay, Bradbury, Brackenridge, James, and Catlin, portray him through vignette, narrative, and tale, while further insight is offered from recent tribal histories written by Alice Fletcher and Francis La Flesche, both of whom are Omaha tribal members, one the daughter and the other an adopted son of the last great Omaha chief, Big Elk.

He was called *Pajaro Negro* by the Spanish. In 1795, James Mackay, employed by the Spanish Commercial Company to explore the upper Missouri, characterized him as a leader of great courtesy, intelligence, and diplomacy, "more despotic than any prince in Europe....the one to decide whether our communication remains open and free."[35] Three years later, Lieutenant-Governor Zenon Trudeau, in an official report to Spain's envoy in Cuba reporting Mackay's winter with the Omaha in 1795, assesses the tribe as "perverse" and Chief Blackbird as "arbitrary, despotic, cruel" and an "implacable...tyrant toward the whites...."[36]

As chief of his tribe, Blackbird seems to have held total sway–a great and absolute ruler who brought security and wealth to the Omaha. Yet he was treacherous, capricious, and deadly in both tribal politics and war.

Bradbury came west to St. Louis in 1809 with a Letter of Introduction from President Thomas Jefferson to then Governor Meriwether Lewis. Bradbury states in his journal that Chief Blackbird, called Oiseau Noir by the French, was renowned in the region for his unchallenged and supernatural-like powers, and that his control of the Lower Missouri River trade and Omaha tribal politics could be attributed to his secret use of arsenic as a poison. Extremely intelligent and charismatic, Chief Blackbird was also known to be ruthless and greedy. Bradbury derived his knowledge of Blackbird's use of arsenic from an interview with a "Mr. Tellier, a gentleman of respectability, who resided near St. Louis, and who had been a former Indian agent there...."[37] Perhaps this was the

same Mr. Joseph Tellier of Ste. Genevieve, a trader in the transportation of furs and a mill owner, who would have been 55-60 years of age in 1809.[38]

Brackenridge, another chronicler of the age, two years later in 1811, writes:

> This chief was as famous in his lifetime amongst all the nations in this part of the world, as Tamerlane or Bajazet were in the plains of Asia; a superstitious awe is still paid to his grave. Yet, the secret of his greatness was nothing more than a quantity of arsenic which he procured from some trader. He denounced death against any one who displeased him, or opposed his wishes: ....[39]

Blackbird established this supremacy among his people and the Missouri River traders by substantiating his prophesies and demands with secret poisonings and arsenic sorcery. [See Appendix 2.]

Edwin James, a botanist and geologist with a U.S. Survey Team, in 1819 compiled journal notes reiterating these traditional beliefs. Additionally, he recounts this tale: Within the tribe, a rival sub-chief by the name of Little Bow, or Petite Arc, opposed his oppressive rule. Blackbird, waiting his opportunity, convinced Little Bow's wife to add arsenic to her husband's food. But Little Bow became suspicious and instead had his wife eat "the contents of the bowl." After she died, he and two hundred of his followers broke from the tribe and established their own village.[40] This was the exact village site where Captain Clark knowingly landed on August 26, 1804–the encampment where he promoted Patrick Gass to Sergeant, replacing the recently buried Sergeant Charles Floyd.

According to George Catlin, Little Bow challenged Blackbird's authority as rightful mystery man of the Omaha. The response was a murderous attempt that failed. Afterwards, Little Bow and his warriors traveled a few days upriver to establish their own village. There, Little Bow and his followers lived until Blackbird's death in 1800.[41]

Significantly, states Fletcher and La Flesche "Before he [Blackbird] died [in 1800] ... the secret of his poisonings became known...."[42]

The Availability of Arsenic in 1800:

Arsenic, a white soluble powder, is found naturally in small surface deposits and as a trace element in shale, pyrites, and other ores. It does not seem, however, that the Native Americans along the Missouri River realized it was a part of their natural environment, although they certainly recognized the 'Bad Spirit' (alkaline) waters of the Council Bluffs area where Sergeant Floyd died.

In the 1700s and 1800s, arsenic was a common and easily procured poison in the white man's world. It was imported, usually from England, by the barrelful for use in the tanning and preserving of hides, and to be alloyed with lead to slightly harden shot and bullets.[43] Lead mining, itself, had begun as early as 1700 by French traders coming down from the Lake-of-the-Woods, and was an extremely important industry around St. Louis and Ste. Genevieve by the 1750s. Most trappers or any trader along the Missouri could have purchased and distributed arsenic.

Arsenic is a lethal and easily soluble, nearly tasteless substance. Depending on dosage and stomach contents, gastrointestinal discomfort usually is experienced within an hour after ingestion. Death by acute arsenic poisoning occurs within hours. It is accompanied by intense abdominal pain, sweating, vomiting, and severe diarrhea as the body attempts to rid itself of the poison. Muscle cramps and thirst persist until the loss of fluids puts the victim into shock. Then, coma and death ensue[44]–a prognosis similar to that in the death of Sergeant Floyd and nearly exact to death by peritonitis.

Death by arsenic poisoning: accidental, homicidal, and suicidal was fairly common in the late 1700s and early 1800s. In fact, arsenic was so easily procured, so inexpensive, and so dangerously lethal that laws were finally enacted to limit its use and availability in England in 1851.[45]

George Catlin may have the explanation of motive for such a war coup, predicated on fear and revenge.

> I mentioned in a former page, the awful destruction of this tribe [Pawnees, two days up the Platte River from the main Omaha village] by the small-pox; a few years previous to which, some one of the Fur Traders visited a threat upon these people, that if

> they did not comply with some condition, "he would let the small-pox out of a bottle and destroy the whole of them." The pestilence has since been introduced accidentally amongst them by the Traders; and the standing tradition of the tribe now is, that "the Traders opened a bottle and let it out to destroy them.[46]

Catlin goes on to say that many of the traders had, then, with "a number of their lives ... paid the forfeit, according to the laws of retribution."[47]

Native Americans expected coercive techniques from often unscrupulous and greedy traders. The Otos and Missourias were "roughly counciled" on August 19, 1804, by the fairly new and raw diplomacy of Captain Lewis and Captain Clark. In the minds of these tribes, the Lewis and Clark Expedition may have seemed little more than a well-armed incursion of whitemen handing out a few presents in a pretense of trade.

CONCLUSIONS

Actions reflect thought and signify intuitions. Our bodies sometimes automatically manifest motivations and intentions, expressing our own best intuitions.

At Sergeant Floyd's burial, Lewis and Clark made a strange and representational act. When they marked his grave, it was with a "cedar pole" rather than a cross, strangely syncopating Floyd's grave with Blackbird's burial mound. This, at the very least, expresses a disquieting similitude–a mirroring reality between the two deaths in the minds of the Captains. The progressive attempts at clarifying their situation and diminishing their vulnerability was both rational and responsible. They were great leaders and were both men of the enlightenment.

The Elk Point Quadrangle, between the Little Sioux and the Big Sioux rivers, including the Council Bluffs area where Floyd was buried, was and is a chemically rich region.[48] The river waters are surface-saturated with mineral elements. Lewis' medical tutor in Philadelphia, Dr. Benjamin Rush, was also a chemist of notoriety. While pursuing his personal hunch of arsenic poisoning, Lewis incurred, or self-induced, his own sickness from field-testing for arsenic. Perhaps he was convinced that the water was tainted and a possible cause of the recent death.

Captain Lewis's actions certainly characterize his zealous commitment to rational, scientific explanations. His compulsion to investigate minerals at that point in the journey was obsessive, and most probably inspired by the circumstances of Floyd's death. However, the actual elements causing sickness from drinking the water would not have been arsenic, but other heavy metals, such as ferrous sulfide found along the bluffs of present day Jackson, Dakota County, Nebraska.[49]

The stories concerning Chief Blackbird were well known. And it is highly probable that Lewis and Clark knew of them. The threat of Native American response to white-man encroachment must have been a concern, for the expedition did keep a constant night watch with good reason. Other negative influences from the Spanish and British among the tribes, to turn them against the U.S. Government and stop the expedition, may have increased this suspicion. Positive proof would remain inconclusive, and Sergeant Floyd's death would remain in part a mystery, but Lewis's intuitions–his suspicions, sensitivities and uncertainties–as brought on by the sudden death of Sergeant Floyd, would linger for many years. In 1806-7, the then Adjutant General and Governor Meriwether Lewis would write a report delineating the Indian problems in the newly acquired Louisiana Territory.[50] In hopes of systematizing a possible solution, the Oto and Missouria were cited as examples of how tribes are agitated, aroused to war and plunder by those hostile to the U.S. Government.[51]

Certainly much was at stake in August of 1804. The safety of expedition members from possible endemic disease was primary. Tribal politics and the desertions by La Liberte and Moses B. Reed must have influenced the thoughts and determined the questions of both Captains. And, additionally, it was believed by many that Chief Blackbird had controlled the Omaha tribe and the trade along the Lower Missouri with arsenic poisonings. Perhaps a warrior who turned such a medicine against his enemies would find favor with the Spirits.

Interestingly, it was Captain Clark–the Indian's friend–who most emphatically syncopated the death of Sergeant Floyd with the uncertainties of a land once controlled by Chief Blackbird. On the day and at the place where Sergeant Gass was appointed as replacement for Sergeant Floyd, Clark wrote:

[Clark, August 26th, 1804]

> ... above the mouth of this Creek a Chief of the Maha [Omaha] nataton displeased with the Conduct of Black bird the main Chief came to this place and built a Town....[52]... this village was built by a Indian Chief of the Maha nation by the name of Petite Arc (or little Bow) displeasd. with the Great Chief of that nation (Black Bird) Seperated with 200 men and built a village at this place. after his death the two villages joined, apt. Pat Gass a Sergt. Vice Floyd Deceased.....[53]

The Expedition had navigated its way through a first crisis–a crisis set amid a context of uncertainties. Inexplicable endemic disease was one threat. Being poisoned by the river water of a strange land another. The threat posed by Indians yet a third. The expedition's primary strategy had been to avoid confrontation, to consider alternatives carefully, and then to proceed, to keep proceeding past the threats and into the unknown as President Jefferson had commanded.

APPENDICES

1: The Omaha, Oto, and Missouria Tribes

1. As early as 1680, the aboriginal peoples from the Great Lakes and the Ohio Valley westward were pressured by European colonization to migrate across the Mississippi River. In some ways this fulfilled the dreamt prophesies and visions of their legendary spiritual leaders, such as Sweet Medicine of the Cheyenne. This "rising white cloud from the east"[54] and the accompanying harsh realities of war, disease, and displacement by European trade and settlement were the undeniable disruptions that would climax and end, within the following one hundred and fifty years, the 12,000 year heritage of this land's tribal peoples.

2. In 1700, these two tribal groups–the Oto, Missouri, Iowa and Pawnee, along with the Omaha, Ponka, Osage and Kansas–had established themselves as a sometimes warring, loosely similar linguistic population with other more powerful enemies at their boarders: the Mandan and Arikara in earth-lodge villages to the north, the Sioux to the east and

northeast, the Cheyenne to the west and northwest, and the Arapaho to the south. All these border nations were strong, numerous, and military peoples who waged war against the Oto, the Pawnee, and the Omaha.
3. Because the Native American cosmology–the relationship with the land, the Mother of their existence–was pervasive within the tribal structure, it is important to recognize the reciprocity involved in making these crucial readjustments. Migrations necessitated adapting the cosmology to the new environment. Being a foundation for daily act, ritual, and ceremony, these cultural changes were not taken lightly, for they were the very fabric of Native American society, providing the harmony and balance upon which tribal life depended.

Additionally, other strong and rapid outside influences, such as the burgeoning European and American settlements, deeply affected and even corrupted aboriginal culture. One particular case in point serves to exemplify this disruption, namely, that of Chief Blackbird, whose grave Lewis and Clark visited as they ascended the Missouri--the same Blackbird who was the medicine or `mystery man' of the Omaha. A successful war leader and skilled negotiator for trade with the French and Americans, he was a village chief, one who held despotic powers over his people from approximately 1790 to 1800.

2: Chief Blackbird of the Omaha

1. Quaife, Milo. "Historical Introduction." *The Journals of Captain Meriwether Lewis and Sergeant John Ordway.* (Madison: The State Historical Society of Wisconsin, 1916): 19-20, states:

"In August, 1795, four months after the departure of Lecuyer, the Commercial Company dispatched its third expedition. It consisted of thirty men, with four pirouges of merchandise, one each of the latter being intended for the Arikara, the Sioux, the Mandan, and the as-yet-undiscovered nations beyond the last named tribe. The leader was James Mackay, a Scotsman,...

"The winter was passed at Fort Charles in negotiating with the Indians and making preparations for the continuance of the journey. An alliance was struck with Blackbird, who promised to send out messengers during the winter to the Sioux and other tribes urging them to come to Fort Charles in the spring to see Mackay, to the end that peace might be

established and the free passage of the upper Missouri might be opened "forever." Blackbird further promised to go in person to escort Mackay to the Arikara nation and to exact vengeance from the Ponca for their treatment of Lecyer's expedition. That the wily chieftain ever had any serious intention of fulfilling his promises may well be doubted."

Quaife supports his assertion by quoting from Lieutenant-Governor Trudeau's report, dated January 1798.

2. Houck, Louis. Vol II: 184, Footnote 4.

"Blackbird was a celebrated chief of the Mahas [Omahas]. It is said of him that being opposed by a portion of his band he secured from some of the traders of St. Louis, "strong medicine," i.e. crude arsenic, and invited some sixty of the fractious warriors to a feast of dog-soup, esteemed a great delicacy among them, and which he had poisoned. After these warriors had done ample justice to the feast he arose and told them that he derived his authority from the "Master of life," and that before "the sun rises again" every one of them should die, and in fact the sixty warriors expired that night. This established the authority of Blackbird among the Mahas, so that he never was opposed again. He died in 1802 and was buried on a hill near present St. Joseph."

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5. Moulton, Vol 10, 29.
6. Ibid. Vol 2, 493.
7. Ibid.
8. Ibid. 495.
9. Packard, Francis R. *History Of Medicine In The United States.* Vol I & II. (New York: Paul B. Hoeber, Inc., 1931) See also *Cambridge World History of Human Disease* edited by Kenneth F. Kiple.
10. Moulton, Vol. 9, 387, 391.
11. Chuinard, 231.
12. Chuinard, 231. This is probably the first report of the western phenomena of alkaline waters, or poisoned waters so familiar to those pioneers who would later travel from St. Louis across the Great Plains.[Personal communication of Phil Smith, geologist.] Alkaline salts from the oxidation of pyrites, and other heavy metals such as copper, aluminum, and gypsum, are abundant in the soils along the Missouri. Quite poisonous in concentrated quantities, they create symptoms of gastrointestinal disorders, including cramps, sweating, and possible retching similar to those experienced by Sgt. Floyd.
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14. Geikie, Sir Archibald, F.R.S. "Determination Of Rocks." *Text-Book Of Geology.* Vol 1. (London: MacMillan and Co., 1903), 109-127. Captain Lewis brought Richard Kirwan's *Elements of Mineralogy.* London, 1784.
15. Moulton, Vol 2, 500.
16. Moulton, Vol 2, 501.

17. Moulton, Personal Correspondence, August 31, 1993. "I have searched the Lewis and Clark volumes (published and unpublished) as you requested. I find the mention of "arsenic" only on the date you noted, August 22, 1804. I also looked for "realgar" but found nothing. I also checked for "cobalt" and found it mentioned on August 22, 25, and 27, 1804. It is also given in some tables in reference to the geographic areas of these dates. I tried several different spellings and wildcard combinations in each instance but came up empty-handed except for what I've noted."
18. Jackson, 238-9.
19. Moulton, Vol 2, 482. Footnote #2 "In the last decade of the eighteenth century, they [the Otos and Missourias] made much trouble for the French traders who wished to ascend the Missouri River beyond the Omaha village to trade with the Arikaras and Mandans. During the winter of 1799-1800 they experienced a catastrophic smallpox epidemic that is supposed to have reduced their numbers to about 900-1500 people, which would be close to Clark's estimate of '300 men,' counting three to five persons per adult male. (personal communication of John Ludwickson.) Thereafter they did not appear as an obstacle to white expansion." Blackbird, their great chief, died along with them in 1800.
20. Ibid. 469.
21. Ibid. 492.
22. Ibid.
23. Moulton, Vol 10, 28-9.
24. Chuinard, 232-3. Qtd. from J. G. Jacobs, *The Life and Times of Patrick Gass* (Wellsburg, Va: Jacob & Smith, 1859), 43.
25. Moulton, Vol 2, 493. Footnote #4. The correct translation is shown to be Very Big Eyes.
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41. Donaldson, 265.

42. Fletcher, *The Omaha*, 82. See also Endnote #1 on Blackbird's sorcery, Moulton, Vol 2, 470.

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47. Ibid.

48. See Miller, R.D. *Geology Of The Omaha-Council Bluffs Area* and Todd, J.E. *Description Of The Elk Point Quadrangle, South Dakota, Nebraska, Iowa.*

49. Ibid. See also Endnote 1, Moulton, Vol 2, 502.

50. Jackson, Vol 2, 696-719.

51. Ibid. 714.

52. Moulton, Vol 3, 13.

53. Ibid. 14.

54. As spoken by Te-o-kun-hko, Swift Man, warrior of the Sioux.