The Search for Clark’s Elusive Yellowstone Canoe Camp

Thomas Jefferson, A Moose, and the Theory of American Degeneracy
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On the cover
The Rochejhone River near Canoe Camp—July 19, 1806 by Charles Fritz
10 inches by 18 inches, oil on board.
Proceeding On: Finding Continuity Amid Change

This past year has been an eventful one. Before discussing LCTHF’s present and future, I would like to convey my appreciation to the outgoing executive committee members: Bryant Boswell, Jim Mallory, Dick Prestholdt, and Stephanie Ambrose Tubbs. They spent countless hours and significant amounts of their own money conducting Foundation business and working to help our organization thrive. Their leadership generated important feedback from the membership and prompted soul-searching for everyone involved. These leaders helped craft our mission statement: “We preserve, promote, and teach the diverse heritage of Lewis and Clark for the benefit of all people.” They helped craft our vision statement as well: “The Foundation will be the nation’s premier non-profit organization for the preservation of the Lewis and Clark Trail and the sharing of its stories.” We are grateful for their talents, services, and efforts and are considering ways to incorporate some of their recommendations in the future.

I extend a special thanks to treasurer Jerry Robertson for his continued association with them all along the trail. I also thank Lorna Hainesworth for her indefatigable work with the chapters. We look forward to our continued association with them all along the trail.

I extend a hand of peace and friendship to the membership on behalf of the Foundation’s new executive committee comprised of myself, Jay H. Buckley (president), Bob Gatten (president-elect), Margaret Gorski (vice president), Larry McClure (secretary), and Jerry Garrett (treasurer). In addition, directors at large include Ken Jurzi, Barbara Kubik, Ron Laycock, Gary Moulton, Philippa Newfield, Jim Rosenberger, Clay Smith, Bill Stevens, and Richard Williams. We are pleased to announce the search for an editor of WE PROCEED ON has been completed and the Board hired Caroline Patterson of Missoula, Montana. We are also grateful for the assistance of Don Peterson and Cathie Erickson at our Great Falls office.

We are appreciative of our partnerships with the USDA Forest Service (especially Elizabeth Casselli in Great Falls) and the National Park Service (especially the Lewis and Clark National Historic Trail led by Superintendent Mark Weekley in Omaha). We have sent a letter to President Brad Garpestad (and incoming President Grey Thayer) and Executive Director Jay Russell of the Lewis and Clark Foundation of the Lewis and Clark National Historic Trail Interpretive Center in Great Falls, Montana, indicating our intent to meet the terms of our agreement with them, which states that we will house our headquarters and William P. Sherman Library and Archive in the Interpretive Center in Great Falls through 2017.

As with Lewis and Clark on their journey, we face obstacles in our future. As we move forward, you are our most important asset. We are a member-based historic trail organization, second in size to the Oregon-California Trail Association. We rely upon the financial dues and pledges of our member and appreciate the contributions of their time, talents, and means. We strive to live within our means and to focus upon the
basics, which include our quarterly journal, *We Proceeded On*; our annual and regional meetings; chapter initiatives; trail stewardship efforts; and committee assignments.

We hope to earn your trust. We want you to renew your membership, respond favorably to the annual appeal, and consider other ways you can contribute to our collective mission and vision. Members belonging to our national association should join at least one of our 32 local chapters. The same holds true for local chapter members. Each national member should encourage all local chapter members to join the LCTHF.

The LCTHF recently disbursed trail stewardship funds to many chapters for important projects this year and we have exciting plans for new trail stewardship initiatives that will be shared at our upcoming rendezvous at Clarksville, Indiana on July 29 to August 1, 2012. As most of you know, these “annual meetings” are actually journeys of discovery to a location along the trail where friends of the Lewis and Clark story and stewards of the trail meet together to learn history, experience the trail, share laughs, create memories, and have fun! This annual reunion of old and new friends has a “family” feel as members foster relationships, develop camaraderie, and share fun times together. We encourage everyone to bring a new friend with them to Clarksville next summer.

We thank you for your suggestions in the recent member survey. We will share the findings of that survey with you in the future. In the meantime, please feel free to contact your chapter presidents and Board liaisons to convey your thoughts and wishes pertaining to the Foundation. You are the best ambassadors for spreading the Lewis and Clark story and fulfilling our charge to be wise stewards of the trail. We look forward to traveling that trail together.

— Jay H. Buckley
President, LCTHF

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Volunteers: The Heart and Soul of LCTHF

Volunteers have always been the heart and soul of this organization. The Lewis and Clark Trail Heritage Foundation has reported as many as 87,000 volunteer hours in a single year to the National Park Service and members of Congress. Tens of thousands of hours go unreported each year and most volunteer efforts go unacknowledged. That does not mean they are unnoticed or unappreciated—quite the contrary. Each hour spent preserving and protecting the trail or planning and executing a meeting or educational program is valued by anyone who visits the trail or attends a Lewis and Clark program. In a perfect world we would recognize every single volunteer act and thank each individual, but we all know that is not possible.

Some projects and efforts are so significant, so necessary and so lasting, that we cannot help but recognize them. Two Foundation members participated in such a project this summer. At the LCTHF board meeting in late July, our board of directors acknowledged the need for volunteers to sort through and organize hundreds of files in the headquarters office. Lynn and Doug Davis of Spirit Lake, Iowa, immediately stepped forward and volunteered to spend several weeks in Great Falls tackling the daunting task. The Foundation was able to pay them a fuel stipend, but Lynn and Doug donated their time and remaining travel and living expenses for the three weeks they were in Great Falls.

They organized 18 boxes of files so that board members and future staff can easily access information related to every facet of the Foundation. Their efforts will help the Foundation operate more effectively and efficiently.

Since 2005, when I first met Lynn and Doug, they have frequently been among the first to volunteer for projects ranging from inventorying trail sites to providing information at a national trails conference. The Foundation has many volunteers like Lynn and Doug and to all of you, I say thanks for keeping our organization running, for protecting and preserving our trail and for sharing the stories of Lewis and Clark with individuals across the country.

WENDY RANEY
Cascade, Mont.
Remembering Jane Randol Jackson

Jane Randol Jackson, Lewis and Clark Trail Heritage Foundation Board of Directors member, passed away at her home in The Villages, Florida, August 8, 2011. A wonderful woman, Jane was one of the hardest workers and deepest thinkers on the LCHTF board. An extremely well-attended service was conducted at Grace United Methodist Church in Cape Girardeau, Missouri. It was altogether fitting that Jane's memorial service was held on August 18, birth date of Captain Meriwether Lewis in 1774. He and Captain William Clark were figures she admired.

Jane was the co-founder of the Red House Interpretive Center and former director of the Cape Girardeau County Archive Center. The first woman to receive the Southeast Missourian's Spirit of America Award, Jane was a strong advocate for preserving local history. Her family, the Randols, came to Missouri in 1797 and was among Cape Girardeau's first residents. In the course of researching her family's history, she discovered the connection between Cape Girardeau's rich history the Lewis and Clark Expedition and, in particular, Louis Lorimier.

Jane served on the Lewis and Clark Bicentennial Commission and assisted in organizing the bicentennial commission in Cape Girardeau, leading to the group's re-enactment and rebuilding of the Red House, a replica of Louis Lorimier's home. The original Red House, next to St. Vincent de Paul Church, had been destroyed. Many people were involved in the rebuilding of the Red House, but none was more passionate than Jane. She was the driving force that brought the entire idea from drawing board to reality—she helped raise $130,000 for the reconstruction project and donated $10,000 of her own money. The Red House opened on November 23, 2003—200 years to the day after Lewis and Clark arrived to buy supplies in 1803.

Jane was a lifetime member of the Lewis and Clark Trail Heritage Foundation on whose Board of Director she served for many years. Jane founded LCHTF's George Drouillard Chapter and served as its president for a number of years. She also belonged to the Discovery Expedition of St. Charles, Missouri, which re-enacted the entire Lewis and Clark Expedition during the bicentennial years of 2003–2006. Jane organized several major Lewis and Clark events, including boat trips, during the final National Lewis and Clark Bicentennial Signature Event at St. Louis and during the memorial commemoration of Meriwether Lewis's death during the 2009 LCHTF Annual Meeting.

Jane was the first director of the Cape Girardeau County Archive Center, serving from 2001–2007. She organized all the records and arranged them so they are very useful to the public. The archive center, an office of the Cape Girardeau County Government, maintains county records dating back to 1797. Before becoming an advocate for preserving local history, Jane touched many lives throughout her 34-year career as a high school French teacher, including four years in Vienna, Austria. She was graduated in 1968 from Southeast Missouri State University with degrees in education and French.

Now having a greater understanding of its past, Cape Girardeau is all the better, thanks to Jane Randol Jackson. Her efforts and commitment to local history will influence many generations in the years to come. Everyone who knew Jane misses her very much, but we all feel privileged to have had this extraordinary lady in our lives.

—Lorna Hainesworth
Great Falls Interpretive Center's One Millionth Visitor

On August 21, 2011, Karen and Alan Hoskinse, two Lewis and Clark history buffs, were enjoying themselves as history buffs on a trip to the Lewis and Clark Interpretive Center in Great Falls. When they stepped through the door, however, they proceeded on a different voyage of discovery: the couple from Idaho Falls, Idaho, was surprised to become visitors number one million and one million and one as they walked through the door. The Hoskinse won a small cache of goods, including a Yogo sapphire ring, valued at $1,700, from Sutherland's Jewelry of Great Falls and they were interviewed by reporters from the Great Falls Tribune. The Hoskinse were introduced to LCTHF, and they became new members on the spot. Next through the door, starting the count toward the two millionth visitor—was John Bailey, along with his wife, Barbara, just minutes after the Hoskinse. When asked if they would like to join LCTHF, the Baileys, who hail from Tasmania, Australia, said as much as they appreciate the invitation, they felt it might be a long way to come for the annual meetings.

Lewis and Clark Day in Frederick, Maryland

Lewis and Clark Day in Frederick was a phenomenal success. Held September 24, 2011, the purpose of the event was to commemorate the various visits Meriwether Lewis made to Frederick during the first half of 1803 and the several times he referenced Frederick in his letters of that same period. During the event, we had 23 living history participants representing at least 10 of our states and something like 15 education stations. Some living history folks who circulated among the visitors acted as "walking museums" as they talked about life at the start of the 1800s.

Thomas Jefferson (portrayed by George Lewis) and Meriwether Lewis (portrayed by Bryant Boswell) both put in an appearance. These gentlemen re-enacted a conversation that could have occurred during the preparation phase of the expedition. We had a Boy Scout troop color guard and about a 50-50 ratio of kids to adults among our visitors. Participants gave out lots of pins, literature, stickers, pencils and bandanas. To the beat of period music, we took images of visitors using a camera obscura. We had a regiment of Hessian soldiers because the location was at the Hessian Barracks. A number of politicians or persons representing politicians were present. We educated everyone about the Eastern Legacy and the current effort to extend the trail. We unveiled and dedicated a Lewis and Clark commemorative monument with a plaque from the Daughters of the American Revolution.
the American Revolution.

The fact of which I am most proud is that—until I discovered the June 6, 1803 letter from Meriwether Lewis to William Linnard in the Frederick County Historical Society archives—few of the Frederick citizenry knew of the significant connection the city had to the Lewis and Clark Expedition. With the help of the Frederick Chapter DAR and the Maryland School for the Deaf, I put together a presentation about Lewis’s three visits and his four references to Frederick so that the people of Frederick and people everywhere would know about the Meriwether Lewis—Frederick connection. We got a grant from the Lewis and Clark Trail Heritage Foundation Trail Stewardship fund for this event. Any monies remaining when all bills have been paid will go toward an exhibit in the newly renovated Hessian Barracks where credit for the exhibit will go to the National Capital Chapter LCTHF along with other contributors.

—Lorna Hainesworth
Lewis and Clark and MNRA Ambassador

Bozeman, Montana
Chapter Creates Time Capsule

Quo Vadis? Where are we going?
That question confronts our Headwaters Chapter of the Lewis and Clark Trail Heritage Foundation. As our membership ages and our ranks thin, we are building upon our experience and love of subject to pass on a legacy of education that will provide a foundation for those who follow us. In our quarter century of activities and study we have accumulated a valuable and educationally useful cache of material objects that we know will benefit those who will research and study our early national history and that of the Corps of Discovery. Our judgment is that we are unlikely to retain necessary membership to survive for a century. We do know that our accumulated materials can become the platform upon which new knowledge and effort can begin.

To that end, Jim Sargent suggested that we collect and store our most useful items so that at the tricentennial a new chapter could form and build upon our work. Thomas Jefferson provided the rationale: “Wherever people are well informed, they can be trusted with their own government.”

Headwaters Chapter has established a time capsule, a cache of over 4,000 items, which have been safely installed in Gallatin Field Airport near Belgrade, Montana. Richard Roehm, a former Air Force pilot and airport board member brought the cache idea to his colleagues who enthusiastically endorsed it. Brian Sprenger, airport manager, offered substantial assistance and made certain that materials remained secure. Gallatin Field is rapidly becoming Montana’s premier airport and will survive until 2085.

In addition to valuable materials relating to the bicentennial of the Lewis and Clark expedition, there are photographic records of sites visited by them from a century ago and today: a photo legacy that will allow assessment of the stewardship of their trail through our area of the Louisiana Purchase. Also included are careful maps and texts by Don Nell and Jack Taylor along with comments by many members of the chapter that identify accurately the explorers’ path through Southwest Montana and on into Idaho. Fifty-one students in Longfellow Elementary school have over the years written their own papers on the expedition. It is our hope that some of these young scholars will be present to open our cache, our time capsule, in 2085.

The cache is secured against the erosion of time by Beth Merrick’s archival storage procedures and the use of protective materials that keep objects safe from insects, moisture, and other agents that could cause deterioration. The fine history of our chapter by R. G. and Jackie Montgomery is there among the artifacts that defined our field trips and lecture series.

Our plan is to set aside a small fund that will enable different individuals over the next 74 years to mount a program every five years to commemorate one of the expedition’s historical events. We want to keep the Lewis and Clark story alive.

Just as they enjoyed fiddle music and dancing and they continued their required scientific work, these five-year programs will combine business with pleasure. Nine partner or overseer groups, representing a variety of community organizations are involved. They include the public school system, the county commissioners, the Bozeman Daily Chronicle, Montana State University Alumni Association and others. Each group now has a notebook with pertinent information and suggestions regarding the continuing five-year celebrations. The Airport Board through its manager will oversee the opening of the cache at a suitable date in 2085.

The Headwaters Chapter, through its time capsule effort, may engender enough community interest to keep the chapter alive. Education has always been at the heart of our enterprise and materials for students about the subject are contained in a trunk that is available at Montana’s Fish, Wildlife and Parks Department. Our members will continue to visit schools and to teach students using these materials. Items in the cache will aid those interested in the Lewis and Clark Expedition at a more advanced level. We do want to ensure that youngsters will be exposed to and become interested in this American epic. Thomas Jefferson is our guide: “An honest heart being the first blessing, a knowing head is the second.” In this manner we proceed on.

—Pierce Mullen
When President Jefferson wrote his orders to Captains Meriwether Lewis and William Clark on June 20, 1803, he told them to gather data representing:

- the soil & face of the country, its growth & vegetable productions...
- the mineral productions of every kind...
- metals, limestone, pit coal, & saltpeter; salines & mineral waters...
- volcanic appearances...
- climate, as characterized by...
- proportion of rainy, cloudy, & clear days, by lightning, hail, snow, ice, by the access & recess of frost, by the winds prevailing at different seasons, the dates at which particular plants put forth or lose their flower, or leaf, times of appearance of particular birds, reptiles or insects.

With the possible exception of Teddy Roosevelt, what other president besides Thomas Jefferson could have issued such detailed instructions regarding natural history?

Since he was a child, Thomas Jefferson had been obsessed with such details about the natural world. Long before his careful instructions to Lewis and Clark, this obsession led Thomas Jefferson to an incredible series of interactions with the most famous zoologist in the world, whereupon he used natural history, and in particular a giant moose, to defend the honor of the fledgling United States.

### Degenerate Americans

In his massive 6,000-page encyclopedia of natural history, *Histoire Naturelle*, published between 1749 and 1788, Count George-Louis Leclerc Buffon proposed what soon became known as the theory of American degeneracy. Buffon claimed, in no uncertain terms, that as a consequence of living in a cold and wet climate, *all* animal species in America were weak and feeble. Buffon—the preeminent natural historian of the eighteenth century—proclaimed that America was a land of swamps, where life putrefied and rotted. Any species unfortunate enough to be imported into America for economic reasons would soon degenerate and produce lines of puny, feeble offspring. Buffon also applied his theory of degeneracy to Native Americans. Indians were, in Buffon’s words, stupid, lazy savages. To make matters worse, by failing to drain the swamps and thus reduce humidity, Native Americans were responsible for the wet climate that led to animal degeneration as well.

Buffon soon developed a cadre of followers, who were quick to build on the Count’s theory of degeneracy. For example, the French Abbé Guillaume-Thomas Raynal and
the Dutch Abbé Cornelius De Pauw—well-known figures in their respective countries—believed Buffon’s theory was brilliant, but did not go far enough. They wrote book-length treatises on how Europeans foolish enough to move to America would produce degenerate offspring. And though Raynal’s ideas on America mellowed as he aged, early on he had the gumption to sponsor an essay contest in France on whether the discovery of America had been beneficial or harmful to the human race.

Books on American degeneracy were quite popular from about 1750 to 1850, and were translated from French into scores of different languages, including German, Dutch, and English. And it wasn’t just the intelligentsia in the salons of Europe who were chattering about this—the topic was discussed in newspapers, journals, poems, and schoolbooks.

Thomas Jefferson understood the serious nature of Buffon’s theory. Why, he reasoned, would Europeans trade with America, or immigrate to the New World, if Buffon and his cadre of degeneracy promulgators were correct? What’s more, the whole degeneracy theory angered Jefferson, the natural historian—how dare natural history be used to damn an entire continent. And so, starting in the late 1770s, Jefferson, using his penchant for exhaustive detail and scientific proof, led a frontal assault against Buffon’s theory of degeneracy. He wanted to make certain people understood how misguided the Frenchman’s theory truly was.

JEFFERSON THE NATURAL HISTORIAN

“Nature,” Jefferson wrote his colleague Pierre-Samuel Dupont, “intended me for the tranquil pursuits of science, rendering them my supreme delight.” One of Jefferson’s many scientific passions was natural history. Had it not been for “the boisterous ocean of political passions,” he might have spent his time promoting science and losing himself in agriculture, anthropology, astronomy, archeology, botany, chemistry, hydrology, linguistics, measuring latitude and longitude, meteorology, natural history, and physics, to name just a few of his scientific passions.

Jefferson’s interest in natural history was sparked by his early days wandering through the Piedmont forests that surrounded his boyhood homes at Shadwell and Tuckahoe. When he was fourteen, he entered a school run by Reverend James Maury, an avid naturalist and collector who rekindled Jefferson’s interest in natural history. At William and Mary College in 1760, Jefferson met William Small, who though only eight years Jefferson’s senior, taught Jefferson mathematics, physics, metaphysics, and philosophy. Jefferson was in awe of Small: he took Jefferson on walks, pointing out all the wonders around them, and taught his student how to “subject the physical world’s phenomena to scientific analysis.” By the time he left William and Mary, Jefferson was hooked on science, and natural history in particular.

We don’t know precisely when Jefferson first came across Buffon’s theory of degeneracy, but in the early 1780s, Jefferson used his book, Notes on the State of Virginia, as a vehicle to voice his displeasure with this idea. Jefferson saw no reason why the differences between the New World and the Old should translate into degeneracy in the former. While respectful of Buffon’s knowledge, Jefferson pointed out the flaws in Buffon’s thinking.
the opinion of a writer [Buffon], the most learned too of all others in the science of animal history, that in the new world...that nature is less active, less energetic on one side of the globe than she is on the other. As if both sides were not warmed by the same genial sun; as if a soil of the same chemical composition, was less capable of elaboration into animal nutriment; as if the fruits and grains from that soil and sun, yielded a less rich chyle, gave less extension to the solids and fluids of the body, or produced sooner in the cartilages, membranes, and fibres, that rigidity which restrains all further extension, and terminates animal growth. The truth is, that a Pigmy (sic) and a Patagonian, a Mouse and a Mammoth, derive their dimensions from the same nutritive juices.  

Jefferson did not deny that climate could affect the size of animals. Instead, he posited that there was no evidence of differences in the climates of the two worlds that would lead one to think that life in the New World should be expected to degenerate compared to life in the Old World.

A QUESTION OF SOURCES

A comparative view of the Quadrupeds of Europe and of America.

Jefferson took on each of these claims in order, using a series of tables to dismantle them. In his first table, for example, Jefferson listed twenty-five species of the Old World that were common to both Europe and America. In Table 1, the weights of the American species were, in Jefferson’s eyes, provided by “judicious persons, well acquainted with the species.”

Jefferson was convinced that these sources had already made up their minds that the Old World was superior to the New in every way before they observed any animals in nature and so could not be trusted on an issue as important as degeneracy. In “Query VI” in Notes on the State of Virginia, Jefferson directly attacked Buffon’s theory of American degeneracy. In the course of discussing a debate between Buffon and himself over whether a huge “mammoth” once roamed North America, Jefferson outlined Buffon’s claims about America degeneracy:

The opinion advanced by the Count de Buffon, is 1. That the animals common both to the old and new world, are smaller in the latter. 2. That those peculiar to the new, are on a smaller scale. 3. That those which have been domesticated in both, have degenerated in America: and 4. That on the whole it exhibits fewer species.

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A QUESTION OF SOURCES

Above and beyond his conceptual arguments with Buffon—about what sort of differences one might expect between life in the Old and New Worlds—Jefferson felt obliged to attack the theory of degeneracy because of a more serious question regarding Buffon’s data. Although Jefferson thought of the Count as a “celebrated Zoologist, who has added and is still adding, so many precious things to the treasures of science,” he felt obliged to ask if the data Buffon employed in his degeneracy argument were accurate, and if not, why not?

Buffon’s theory of degeneracy rested largely on the data of others, and Jefferson argued that the Count’s sources had “causally” collected their data, and what they wrote was based on hearsay. Jefferson challenged the veracity of the travelers upon whom Buffon relied:

“[W]ho were these travellers?” Jefferson asked. Were they reliable, and trustworthy like Buffon? “Was natural history the object of their travels?” he continued. “Did they measure or weigh the animals they speak of? Or did they not judge of them by sight, or perhaps even from report only? Were they acquainted with the animals of their own country, with which they undertake to compare them? Have they not been so ignorant as often to mistake the species?”

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<td>Hound, Herisson</td>
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<td>Marten, Marmot</td>
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<tr>
<td>Water Rat, Rat d'eau</td>
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<td>Weasel, Blette</td>
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<td>Flying Squirrel, Polatocoe</td>
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<td>Skrew more, Menandro</td>
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Table 1 – One of the tables Jefferson used in Notes on the State of Virginia to debunk Buffon’s theory of degeneracy.
American entries were left blank because Jefferson simply did not have the data. The results were clear: "the first table," Jefferson told his readers, "impeaches the first member of the assertion, that of the animals common to both countries, the American are smallest..." The subsequent tables impeached Buffon’s other assertions.

Jefferson’s rebuttal in Notes on the State of Virginia to the theory of degeneracy was the opening sortie in a two-pronged attack. The second line of his offense involved a unique weapon: a giant moose. Jefferson had spent a great deal of time putting together the numbers that went into his size comparison. But he also understood the power of the physical, and so Jefferson wanted to present Buffon with an example that showed that the degeneracy theory was out-and-out wrong. A large moose—preferably one that stood seven to ten feet tall—would serve that purpose quite well (Figure 1). And so Jefferson began the search for just such a creature.

**The Quest for the Giant Moose**

Jefferson gathered as much data as he could about the moose, and at the same time, started a long-term search for just the right specimen to present to Buffon. Early on in his Notes on the State of Virginia project in 1784, he began circulating to many of his friends a sixteen-question survey on the habits, size, and natural history of the moose, with explicit instructions for that information to be gathered by only the most reliable hunters. And if such hunters, could procure for him the skeleton of a giant moose, he would forever be in their debt.

John Sullivan quickly became his point man in this effort. The attorney general of New Hampshire, a representative at the second Continental Congress, and a Revolutionary War prisoner, Sullivan was not your typical moose hunter of the day when Jefferson approached him. Sullivan was happy to help his friend and colleague. He told Jefferson in 1784 that “the permission which your Excellency has given me of keeping up a correspondence [in part about the moose] affords me the highest pleasure.”

Within two months of his 1784 exchange with Sullivan, Jefferson was en route to Paris as Minister Plenipotentiary, and sometime in late 1785, he dined with Buffon. Soon after that, Jefferson wrote his friend, Archibald Cary, that Buffon was “absolutely unacquainted” with the American moose and deer. Buffon thought that the moose was simply a miscategorized reindeer. At their dinner together, Jefferson told Buffon “that the rein deer could walk under the belly of our moose.” To his dismay, however, Jefferson noted that Buffon “entirely scouted the idea.”

After the dinner, Jefferson immediately reissued his appeal for a moose from John Sullivan. With a new sense of urgency and a keener eye for detail, he begged Sullivan not to forget the moose:

The readiness with which you undertook to endeavor to get for me the skin, the skeleton and the horns of the moose...emboldens me to renew my application to you for those objects, which would be an acquisition here, more precious than you can imagine. Could I chuse [sic] the manner of preparing them, it should be to leave the hoof on, to leave the bones of the legs and thighs if possible in the skin, and to leave also the bones of the head in the skin with horns on, so that by sewing up the neck and belly of the skin we should have the true form and size of the animal. However, I know they are too rare to be obtained so perfect; therefore I will pray you send me the skin, skeleton and horns just as you can get them.... Address them to me, to the care of the American Consul of the port in France to which they come.”

On January 26, 1787, Sullivan wrote Jefferson a most promising note: he had obtained the sought-after moose. The moose was not actually in Sullivan’s hands quite yet, but rather “on the Connecticut River,” en route to...
the Attorney? General. “I expect it in a sleigh as soon as the roads are broken through the snow which is now very deep,” Sullivan wrote, “and no time shall be lost in forwarding the same to your excellency.”

It took fourteen days “with a team in the transportation,” before the moose arrived at Sullivan’s home on April 3, 1787.

The weeks of transport took a heavy toll on the moose’s carcass; Sullivan and his team had particular trouble preserving the skull bones and antlers. They reconstructed the moose as best they could, but for some reason they were unable to save the antlers. Sullivan, however, sent another pair, telling his friends—“they are not the horns of this moose but may be fixed on at pleasure.”

**Shipping a Moose Overseas**

Sullivan hoped to send the moose from New Hampshire through England to the French port of Le Havre De Grace, where Jefferson could arrange to have it picked up. On May 29, 1787, Sullivan wrote to Jefferson that the ship left harbor at Portsmouth on the ninth of May, but the moose cargo had been left behind “either through accident or design.” Sullivan quickly pointed out that he had contacted a Mr. De la Tombe, who would ship the moose skin and skeleton to Le Havre De Grace. Jefferson did not receive these communications until September 20, 1787.

On August 15, 1787, having heard nothing more, Jefferson wrote Sullivan a depressing letter. Jefferson assumed that the moose had been lost for good. Even after Sullivan’s letter arrived in September, Jefferson didn’t believe the moose would make it to him, given all that happened in his nearly decade-long quest for the beast. He wrote a friend that “all are lost, so that this chapter of natural history will still remain a blank.”

If Jefferson had waited just a few more days, he would have saved himself a lot of grief—the remains of a seven-foot-tall moose arrived at Le Havre De Grace around October 1, 1787. At this point, an ecstatic Jefferson wrote to Buffon that he was “happy to be able to present you at this moment the bones and skins of a moose, [and] the horns of [another] individual.”

Jefferson wanted Buffon to understand that he had misclassified the moose as a much smaller reindeer—indeed, he informed the great naturalist “the moose is perhaps a new class.” A new class of beast, Jefferson hoped, that would help Buffon see the error of his ways regarding North American degeneracy. For good measure, and no doubt with a smile on his face, Jefferson also requested of Buffon that the moose be “stuffed and placed on his legs in the king’s cabinet.”

![Count Buffon, author of the 6,000-page *Histoire Naturelle*, painted by François-Hubert Drouais.](image)

Buffon received the moose that Jefferson had sent him, and Jefferson wrote in his journal that the skin and skeleton “convinced Mr. Buffon. He promised in his next volume to set these things right....” It is not clear what Buffon was convinced of or what he would set right—we have no record of this from the Count. It might be fair to assume that Buffon was convinced the moose was a larger creature than the reindeer. Perhaps Buffon might have conceded that the moose did not fit well with his theory of degeneracy. Whether he would have changed his mind on the whole issue, as Jefferson believed, is hard to know. No next updated volume with corrections would ever appear. Within six months of receiving Jefferson’s moose, Count Buffon was dead.

Jefferson could take comfort in the fact that the Count had seen such a stark example of an America fauna that was anything but degenerate. Captured in the Maine woods, the moose with its “borrowed” rack was reassembled and delivered to the Count. As John Sullivan wrote to Thomas Jefferson April 16, 1787, “Every engine was set at work to preserve the bones and cleanse them from the remaining flesh. And to preserve the skins with hair on, with the hoofs on and bones of legs and thighs in skin without putrefaction.” The effects of the moose on Buffon—
whatever they were—would not be seen in any revisions to *Natural History*.

Lee Alan Dugatkin is a professor and distinguished university scholar in the department of biology at The University of Louisville. He is the author of many books, including *Mr. Jefferson and the Giant Moose* (*Chicago, Ill.: The University of Chicago Press, 2009*).

NOTES


2 Ibid.


4 Ibid., p. 16.

5 Ibid., p. 28.


7 Ibid., 68.

8 Ibid., 56.

9 Ibid., 48.

10 Ibid., 50.

11 Ibid., 50.

12 Ibid., 57.


ON THE BANKS OF THE YELLOWSTONE RIVER, IN WHAT IS NOW MONTANA, CAPTAIN CLARK ESTABLISHED A CANOE CAMP WHERE THE LAST OF THE SIXTEEN CANOES CONSTRUCTED DURING THE LEWIS AND CLARK EXPEDITION WERE MADE. ON SUNDAY, JULY 20, 1806, CLARK WRITES IN HIS JOURNAL ABOUT HIS EFFORTS TO CREATE THE DUGOUT CANOES.

I DETERMINED TO HAVE TWO CANOES MADE OUT OF THE LARGEST OF THOSE TREES [COTTONWOODS] AND LASH THEM TOGETHER WHICH WILL CAUSE THEM TO BE STUDY AND FULLY SUFFICIENT TO TAKE MY SMALL PARTY & SELF WITH WHAT LITTLE BAGGAGE WE HAVE DOWN THIS RIVER.¹

HE CONTINUES TO DESCRIBE THE LENGTH AND WIDTH OF THE CANOES AND THE THREE MEN WHO "SET IN AND WORKED UNTILL DARK."²

THOSE TREES APPEARED TOLERABLY SOUND AND WILL MAKE CANOES OF 28 FEET IN LENGTH AND ABOUT 16 OR 18 INCHES DEEP AND FROM 16 TO 24 INCHES WIDE.³

WE KNOW FROM CLARK'S JOURNAL ENTRIES THAT THE TREES WERE FELLED WITH THREE AXES FITTED WITH CHOECHERRY

BY J. JEFFREY DIETZ
handles. What we do not know, however, is the precise location of this last canoe camp. After two hundred years, mysteries still linger along the Lewis and Clark Trail.

This may soon change. This past summer, two members of the Rochejhone Chapter of the Lewis and Clark Trail Heritage Foundation in Billings set out to unravel this mystery. Tom Rust, assistant professor of history at Montana State University—Billings and Ralph Saunders, cartographer and hydrologist, worked to locate and authenticate the site of this elusive camp. Sanders, an expert on mapping, hydrographic surveys, and aerial photography, brought thirty-five years of experience to the task. Tom Rust, assistant professor of history at Montana State University—Billings and an experienced archaeologist brought along his leadership and coordination skills. As president of the LCTHF’s Rochejhone Chapter and an amateur historian, I joined the members of the Rochejhone Chapter on the search. Their story is documented in the following pages.

While Clark had intended to build dugout canoes—he had planned travel down the Rochejhone by canoe—this method of travel suddenly became more urgent on July 18, 1806, when Private George Gibson was severely injured. Gibson was wounded, Clark wrote:

attempting to mount his horse after Shooting a deer this evening fell and on a Snag and sent it nearly [NB: two] inches into the Muskeler part of his thy. he informs me this Snag was about 1 inch in diameter burnt at the end. this is a very bad wound and pains him exceedingly. I dressed the wound.4

Travelling on horseback proved to be painful and numbing for Gibson, and delayed Clark’s goal of returning to the United States as rapidly as possible. Three days later, Clark wrote that Private George Gibson was “beginning to heal.”5


Clark’s chosen location was also near large herds of game. His journal entries abound with references to “fat bucks,” elk and “Buffalow” that roamed “in great numbers on the Scerts of those large gangues which are to be Seen in every direction in those praries.” The previous days of privation were replaced with the killing of seven elk, and four deer which were added to a tally of two deer, an antelope and two bears killed earlier. Not only was the meat welcome, the hides were also coveted for clothing and for trading once the party reached the Mandan Villages. Wolves, also abundant in the area, devoured most of the elk.

On the morning of July 21, 1806, Clark was informed that half of his fifty horses were missing. He sent several men after the horses, including Private George Shannon who “was equally unsuckcessfull.” What Shannon found, however, was “a remarkable large Lodge about 12 miles below, covered with bushes and the top Deckorated with Skins &c and had the appearance of having been built about 2 years.” It was most likely a Crow sun dance lodge. Believing that the horses would not willingly give up the lush grass near the camp for the dry short grass of the plains, Clark was “apprehensive that the indians have
Stolen our horses. On July 23, 1806, Sergeant Nathaniel Pryor found a wet, worn-out Indian moccasin and part of a robe which confirmed Clark's suspicions that the horses were taken, as his journal entry indicates.

Those Indian Signs is Conclusive with me that they have taken the 24 horses which we lost on the night of the 20th instant, and that those who were about last night were in Serch of the ballance of our horses which they could not find as they had fortunately got into a Small Prairie Surrounded with thick timber in the bottom. Labeeh returned having taken a great Circle and informed me that he Saw the tracks of the horses making off into the open plains and were by the tracks going very fast.

The twenty-four horses were never seen again. Sergeant Pryor, who was routinely in charge of the horse herd, was directed to take the remaining horses to the Mandan Villages, while Clark and the majority of the party descended the river by canoe. To Pryor's chagrin, these horses also went missing several days later never to be found.

On Pryor's overland journey, he also carried a letter Clark had written to Hugh Heney, a North West company trader, who was possibly located at the Mandan Villages or at the Assiniboine House in Manitoba. Clark requested Heney to persuade influential Sioux Chiefs to accompany the Corps of Discovery to the nation's capital. He hoped to impress the Sioux so that they would willingly submit to the prowess of the United States.

Clark penned a speech, probably written at the canoe camp, intended for the Crow (Apsa’alooke) Indians whom he anticipated meeting.
he anticipated meeting. In the speech, Clark expressed an interest in building a trading post among the Crows in exchange for furs.

Children Your great father the Chief of the white people intends to build a house and fill it with such things as you may want and exchange with you for your skins & furs at a very low price. & has directed me [to] enquire of you, at what place would be most convenient for to build this house, and what articles you are in want of that he might send them immediately on my return.10

Clark decried the loss of his horses, not once, but twice, the first time directly admonishing them.

His speech, however, was never given. Although smoke was seen several times, and Charbonneau once saw an Indian across the river, he did not meet with the Crows.

You Great father will be very sorry to hear of the [blank] stealing the horses of his Chiefs warriors whence he sent out to do good to his red children on the water of the Missonare.11

He also invited several of the Crow chiefs to visit the United States, attempting to woo them east with the promise of gifts for their people.

Children If any one two or 3 of your great chiefs wishes to visit your great father and will go with me, he will send you back next Summer loaded with presents and some goods for the nation. You will then see with your own eyes and here with your own years what the white people can do for you. they do not speak with two tongues nor promis what they can't perform.12

His speech, however, was never given. Although smoke was seen several times, and Charbonneau once saw an Indian across the river, he did not meet with the Crows.

The canoes were finished at noon, July 23, 1806. To prepare for an early morning departure, the men had only to make oars and poles and place the canoes in the water. Three buffalo were killed and as much of the meat as could be carried was saved. Meat previously butchered and left to dry on a scaffold had been eaten by the wolves or coyotes.

The next morning, at 8 A.M., Clark and his party, including Sacajawea and Pomp, launched the canoes. Pryor, along with Privates George Shannon and Richard Windsor followed along on land with the remaining horses. Although the canoes took in some water, they carried the party from the Rochehjone River to near Saint Charles on the Missouri River.

The canoe camp was abandoned, but as we shall see, not forgotten.

Jeffrey Dietz, a native Montanan, is a former educator who enjoys retracing the footsteps and sharing the stories of early travelers who once visited this last best place.

NOTES
2 Ibid.
3 Ibid.
5 Ibid., p. 209.
6 Ibid., pp. 208–209.
9 Ibid., p. 211.
11 Ibid., p. 211.
12 Ibid., p. 213.
For years, Lewis and Clark enthusiasts have had differences of opinion over the location of Captain Clark’s Canoe Camp. What they agree on is this: the camp was located on the Rochejhone River, later known as the Yellowstone River in what is now Stillwater County, Montana. Captain Clark and thirteen members of the Corps built two dugout canoes at that location and prepared for the final leg of their long two year adventure. They arrived at the campsite July 19, 1806, by horseback, and left on the morning of July 24, 1806 in two lashed-together canoes. The same morning, Sergeant Nathaniel Pryor and two other members continued along the river by land with the remaining twenty-six horses. Once again the members of the Corps split up with the intention of rejoining at the Mandan Villages.

Having grown up in Stillwater County, forty miles west of Billings, I am well aware that local residents are very proud that Captain Clark not only journeyed through this region, but made dugout canoes in their backyard. But, the question has long been, whose backyard?

Locating the Right Backyard

No less than eight different sites for Canoe Camp have been recognized over the last hundred years. The eight sites, shown on Figure 1, are located between Columbus and Park City, Montana. The distances between the eight sites vary by as many as twelve miles. Up to now, the studies have been general in nature and none were performed with the specificity of an archaeological investigation. My task was to review the available information, studies, and research to narrow down the site to a more specific location. This was necessary in order to stay within the archeology project’s small budget. Of course, we hoped such an investigation would provide the necessary clues to solve the mystery. I wanted to use as much information as possible from past studies, but I quickly discovered it was also necessary to perform a study of historic changes in the river channels. Such a study is technically called a channel migration analysis or a fluvial geomorphology study.

Clues: Black Bluffs, Dark Timber, and River Miles

Elliott Coues was the first known person to attempt to locate Clark’s Canoe Camp on the Yellowstone River, which he recorded in his 1893 three-volume book The History of the Lewis and Clark Expedition. Coues utilized river miles exclusively to locate the camp. He believed Clark advanced only twelve miles on July 19, 1806, instead of the eighteen miles that Clark recorded in his journals. Coues determined the location to be a half of a mile above the entrance of Allen Creek, near Wimsett Point, which Coues said matched Clark’s notes on the high yellow bluffs, and the black bluffs near camp.

Olin Wheeler was probably the second person to locate the campsite, which he documented in his 1904 book The Trail of Lewis and Clark, where he stated the
Camp's location was about six miles east of Columbus, Montana. Wheeler specifically stated that he made a special effort to locate correctly this particular camp. His determination was mainly tied to the black bluffs that Clark had reported to be east of Canoe Camp. Wheeler thought the black bluffs were the presence of dark timber, not the dark-colored outcroppings of Niobrara and Carlile Shale. To help place the campsite, Wheeler also used Clark's river miles below the Stillwater River and the miles above the Clarks Fork of the Yellowstone River, hoping that the distances Clark recorded would help locate the campsite. The Stillwater River flows into the Yellowstone River south of Columbus and the Clarks Fork of the Yellowstone River flows into the Yellowstone River east of Park City, south of the City of Laurel, Montana. Wheeler positioned the site on the north side of the river, west of the railroad station known as Rapids, and east of Hensley Creek. Unfortunately, Wheeler did not have access to the original journals edited by Reuben Thwaites which came out shortly after Wheeler's book was published.

According to Fritzie Kober Idleman, Clarence Tilden, a local teacher first claimed in the 1930s that Youngs Point was the site of the original Clark camp. Idleman described Mr. Tilden's location in her book Park City 1882-1982, A History of 100 years...from Stage Coach to Space Shuttle by saying "The notes of the party read that they spent a week in the valley about where Youngs Point is located..." How Mr. Tilden made the determination the campsite was in the area of Youngs Point is not known, but it could have been based on the 1893 book by Elliott Coues, which is somewhat close to Youngs Point. Regardless, the Youngs Point location has been firmly planted in the minds of local people for decades. To suggest a different location to some folks will invite a lively conversation.

The Montana Department of Fish Wildlife and Parks located the campsite mid-way between Columbus and Park City. Their reasoning was based on the assumption that the scale of Clark's Map 108 between the Stillwater River and the Clarks Fork of the Yellowstone River, was consistent for that entire river stretch. Unfortunately, Clark's map was not consistent between those two points. The issue of Clark's map scale will be discussed in more detail later in this article.
The U.S. Bureau of Land Management (BLM)\textsuperscript{7} and the Western Heritage Center (WHC)\textsuperscript{8} placed the campsite at the same location between Youngs Point and Park City. Martin Plamondon, showed the campsite to be slightly east of the BLM and WHC location in his book \textit{Lewis and Clark Trail Maps}.\textsuperscript{9} It is not known how the BLM and the WHC made their determinations, but Plamondon did utilize Clark's survey information.

Robert Bergantino, Montana Bureau of Mines and Geology,\textsuperscript{10} Dr. Gary Moulton, University of Nebraska,\textsuperscript{11} Fifer and Soderberg,\textsuperscript{12} Wark and Mussulman,\textsuperscript{13} and Ralph Saunders, Rocky Mountain Surveys\textsuperscript{14} located the campsite further to the east, closer to Park City. In 1965, Mr. R.E. Burdge\textsuperscript{15} situated the campsite at a location close to that of the previous five sources.

Robert Bergantino told me he had used all of Clark's information and Dr. Moulton referenced Mr. Bergantino as his source. Fifer and Soderberg references Robert Bergantino in their book but it is not known how Wark and Mussulman made their determination. I (Ralph Saunders) first made an independent study in 2006 with knowledge of most of the above sources. It is not known how R.E. Burdge made his determination.

The most reliable source of information is Captain Clark himself.\textsuperscript{16} Fortunately he left us with sufficient information to determine the approximate location. The main task at hand was to use current technology to apply the information he recorded. The biggest obstacle to successfully locating the actual site is the past erosion from the river, and unfortunately, because of the current rate of erosion adjacent to the campsite, it is under greater danger today than it was in the first 190 years of its existence.

**JEFFERSON'S INSTRUCTIONS TO THE CORPS**

On June 20, 1803, President Jefferson gave specific instructions to the Corps to, "take careful observations at all remarkable points on the river...and other places and objects distinguished by such natural marks and characters of a durable kind...as they may be with certainty be recognized hereafter. The courses of the river between these points of observations may be supplied by the compass, the log-line & by time. Your observations are to be taken with great pain & accuracy, to be entered distinctly and intelligibly for others as well as yourself."\textsuperscript{17} These directions were taken very seriously.

**CAPTAIN CLARK'S OBSERVATIONS WERE RECORDED WITH GREAT PAIN & ACCURACY**

Captain Clark's observations and record-keeping were nothing short of amazing and because of his dedication, persistence and thoroughness, we can quite closely determine his location throughout the Expedition's
journey from Saint Louis to the coast and back. Clark conducted a bearing and distance survey of every river stretch (traverse leg) and maintained survey logs. The logs serve as notes for his bearings and distances, but they also provide a wealth of additional terrain and river descriptions that help support his survey information.

Clark maintained two sets of logs. It is not well understood as to when he recorded each log, but I believe he recorded the first log at approximately the same time he performed his compass shot. The second log may have been recorded during the midday break, and/or in the evening. The second log often includes more detail than the first log. Perhaps more time was available when he wasn’t traveling, and he apparently believed the additional information in the second log was valuable enough to record.

This brings us to Clark’s large-scale route maps that he produced throughout the Expedition.20 His survey logs and large-scale maps are magnificent products, in fact, as Gary E. Moulton of the University of Nebraska, states, “Their greatest effort—charting the geography of the new land—produced the greatest results.”21 That is quite a statement knowing everything the Expedition accomplished. However, a person should not overlook Clark’s journal entries that he recorded each day. One entry on July 23, 1806, was particularly useful in this study, which will be discussed later.

**USING CLARK’S SURVEY LOGS**

Clark’s survey logs are the most important source of information for determining his approximate locations. He used a quadrant compass to survey the direction of each river stretch and then estimate a distance. All bearings were recorded as a foresight (direction of travel) but it is evident to me that he would have also taken advantage of a backsight (direction previously traveled) where necessary. Unfortunately, his traverse surveys are not easy to understand by those not knowledgeable about surveying, and therefore Clark’s surveys are not utilized to the extent they should be.

One of the first drawbacks to using Clark’s survey logs, however, is the ever-changing magnetic declination. Magnetic north is the direction of the north end of a magnetized compass needle,20 but that direction varies from true north because the magnetic field is not located at the North Pole. Magnetic declination is the angle of difference between true north (geographic north) and magnetic north, which varies around the globe. That angle also changes over time, a difference known as variation of declination. In Stillwater County the magnetic declination was about 19 degrees east of true north in 1806, while it is currently about 12 degrees to the east. Based on those values, the variation of declination in Stillwater County has been about 7 degrees in the last two hundred years. If a person does not know what the magnetic declination was at the time of the Expedition, it becomes very difficult to be sure which river stretch Clark was actually surveying, because Clark strictly used only magnetic north-compass readings while performing his surveys.21

The U.S. Geological Survey, (USGS) National Geomagnetic Information Center’s geomagnetism model that helped me compute the 1800-era historic declination and variation of declination of 19 degrees East in Stillwater County.22 Once this was determined, I could plot Clark’s compass bearing and distance for each river stretch. Clark’s compass accuracy was remarkable. A good example is shown in Figure 2, which describes Clark’s traverse surveys for July 18, 1806, between what is now Reed Point and Columbus, Montana. Fortunately, in this region, channel changes are not as significant as they are on more mature flood plains, and therefore a current small-scale map can be utilized quite successfully, to plot his traverse surveys.

Figure 3 shows Clark’s six traverses for July 19, east of Columbus, on a segment of Clark’s Map 108. Clark obviously took his survey bearings into account when he drew his large-scale maps.

**RIVER MAPS: HACHURES & TRIBUTARIES**

Clark’s large-scale maps of the river also include surrounding terrain and identifiable landmarks. Important features on Clark’s maps were his short line etchings,
called hachures that he drew to illustrate the major terrain breaks along the river. See Figure 3. Once a person is able to differentiate between a wide flood plain adjacent to the river and where steep hills are adjacent to the river, Figure 4 Present-day Names Plotted in Red on the same Map Segment as shown in Figure 3.

Notice author's modifications to Clark's hachures (under red arrows) and additional side tributaries that have been added to reflect the detail that Clark generally included in his maps. This map really depicts the accuracy of Clark's map scale for this given river stretch.

the easier it is to "geo-reference" a given river stretch or landmark.

Clark's mapping of the river area he travelled that July 19, 1806, afternoon was very true to scale but the position of his hachures on his map lacked specificity. That part of his map was also entirely void of side tributaries, as compared to his mapping of these features on other days. No one knows why he mapped fewer features on July 19, but keep in mind that Gibson was injured the previous evening while attempting to mount his horse, and Clark may have been distracted by Gibson's wound. In his July 19 entry, Clark did make it a point to mention Gibson's condition and the attempt to find timber large enough to make canoes. On Figure 4, I have added additional hachures and side tributaries that Clark would have likely drawn, had his mapping been up to par that day. I have also added the current names of these features to make it easier for readers to identify this stretch of the Yellowstone River.

The Varying Scale of Clark's Maps

Clark's maps are excellent products, but his map scale can vary significantly, even on the same map. Map 108 is a good illustration. The scale of the map above Canoe Camp is much smaller than the scale below Canoe Camp. Keep in mind that Clark drew those two segments of this subject map on different days and under different conditions. Clark mapped the river above Canoe Camp on July 19, 1806 from horseback, but he mapped the river from Canoe Camp to the mouth of the Clarks Fork River on July 24, 1806, while traveling the Rochejohne River in the two lashed-together canoes.

Clark mapped fifteen traverses in the short segment of the river between Canoe Camp and the Clarks Fork, and a total of twenty-three traverses on July 24, 1806 Compare that to the six traverses on the July 19, 1806. It is evident that Clark's surveys on July 24 were much more detailed than on July 19, and it is clear to me that he exaggerated the scale of his map from Canoe Camp to the mouth of the Clarks Fork River to be consistent with his greater survey detail. To help confirm this supposition, and to find the approximate location of Canoe Camp, I plotted Clark's traverse surveys from Canoe Camp to the mouth of the Clarks Fork, see Figure 5. I used Montana's Water Resources Survey maps of the 1940s as a base, with modifications from 1878 Government Land Office maps. Now see Figure 6. This map, which I made in 2006, depicts a segment of Clark's Map 108 after the
A STORY OF CHANGING CHANNELS

Clark's Map 108 deserves credit for helping us know where to locate our more detailed channel migration analyses. Clark located his campsite symbol on a specific bend of the river on the north side. Adjacent to that symbol, Clark mapped an island as well as marked terrain hachures on the river's south side. The proximate locations of these three features were the valuable ingredients of the forthcoming channel migration study. Jefferson did not give specific directions for Clark to draw maps, but like the old saying goes, a picture is worth a thousand words, and Clark had a good understanding of his objectives. Thank goodness for his foresight.

When the location was selected for the channel migration study, I acquired all available historic maps and aerial photos. The earliest map was an 1878 Government Land Office (GLO) cadastral survey plat. That map was most valuable to me because the river in 1878, adjacent to Canoe Camp, was at nearly the same location as it was in 1806. Therefore, the 1878 map was the key to determining the river's northern edge in 1806. This initial task was the most difficult, time consuming, and critical step in the entire process. See Figure 7, which superimposes 1806 and 1878 river locations.

The 1878 map, similar to Clark's map, showed two channels in the area of the camp. The two channels were split by an island. The southern channel was apparently the main channel, which allowed the northern channel to maintain its physical integrity for at least another seventy-two years. If the northern channel had been the main channel, considerably more accretion (slow bank cutting and depositing) would have occurred between 1806 and 1878 in the bend of the river adjacent to the campsite. Therefore, I believe the campsite would have likely been destroyed by 1878.

Sometime after 1878, immediately west of the campsite, the river's old northern channel suddenly changed to a new channel. This is known as an avulsion. This directed the river's flow even further to the north. Fortunately the avulsion occurred after 1878 or this study would have been short-lived. The new northern channel helped to protect the campsite even more from the erosive forces of the river until sometime between 1979 and 1991 when water again started flowing in the old northern channel (now the middle channel).

By 1996 the flow in the current middle channel was significantly more. This was because of a new and growing island in the northern-most channel that was—and still is—deflecting the water flow into the middle channel. See Figure 8. By 2009, the middle channel has become the prominent channel of the river, and the main force of the river's flow is now on the bank adjacent to the study site. It is interesting how some islands, in proximity to the campsite, have helped to preserve the site over time, while this more recently formed island is causing a significant impact on the study site. See Figure 8, where the 1806, 1878, 1941, 1954, and 2009 river channels have been superimposed over the 1956 USGS quadrangle map. Notice the many channel changes during those time periods. It is apparent that it is a miracle that we even have a site to study.

Clark's daily journals provided another useful piece

scale of Clark's map has been corrected to the real world.24

Figure 6
My 2006 Work Map Showing Clark's Inconsistent Map
Scale for the Stretch of the River from the Mouth of the Stillwater River to the Mouth of the Clark's Fork River

Upper Map - as originally drawn by Clark
Middle Map - recent map of the same area, with 1806 revisions made to the Stillwater River and Canoe Camp area
Lower Map - Clark's map rescaled to the real world

Figure 7
River Channels for 1806 and 1878 Superimposed

Figure 8
Notice the similar location of this island in 1878 and in 1806
Base Map: U. S Geological Survey 7.5' Topographic map, Montaqu, 1956

We Proceeded On  23

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of information. Clark stated they put the canoes in the river the evening of July 23, before leaving the campsite on July 24, 1806. That helps to further convince me that in 1806, the deepest part of the river channel, known as a thalweg, was in the southern channel (below the island). Had the northern channel been the main channel in 1806, the deepest part of the river would definitely have been near the north bank, next to the campsite, where the river bent south. The increased depth of the river at that location would then have made it extremely difficult and precarious, at best, to put their canoes in the river the night before as Clark described in his journal on July 23.

**COINCIDENCE OR MILITARY PROTOCOL?**

GLO plats don’t often depict islands but the 1878 GLO plat shows an island very close to the same location where Clark’s Map 108 shows an island, adjacent to the campsite. Using the 1878 GLO plat, that island, and Clark’s hachures on the south side of the river, Clark’s campsite symbol was found to be 300 feet from the predicted northern edge of the 1806 river. Was Clark following military protocol by making his camp 300 feet from the river, similar to their camp at Travelers Rest? Or was this a coincidence?

Using Clark’s 1806 map and information, the GLO map, and current technology we were able to narrow down what we hope is the site of Clark’s actual camp. It is a critical step in a larger process of preserving the Lewis and Clark Trail. It is vitally important to preserve the trail, and one of the best ways to preserve the trail is to locate more specifically where the Corps travelled throughout the Expedition. After all, if you don’t know where something has happened, how do you preserve its location?

Saunders, a certified aerial photogrammetrist who performs hydrographic surveys and historic river channel studies, is the author of a two-treatise publication involving Clark’s journey and survey methodology.

**NOTES**

5. Montana Department of Fish, Wildlife and Parks, editor and Publisher, _Captain Clark on the Yellowstone River_, undated. Front side of map, Big Timber to Park City.
8. Western Heritage Center, Linny Stovall, ed., _Along the Yellowstone, A Guide to Historic Sites of the Yellowstone River Valley._ (Blue Heron Publishing, undated). Brochure, p. 12, and a map accompanying the brochure, depicted the location of the camp site. The Western Heritage Center is located in Billings, Montana.
10. Robert N. Bergantino and Kenneth L. Sandau, ed., _The Route and Campsites of Lewis and Clark in Montana, A Geologic Perspective._ (Montana Bureau of Mines and Geology, with funding by the National Aeronautic and Space Administration through the Earth Observing System Education Project of the University of Montana, 2004). This product is a graphic illustration of all Lewis and Clark campsites in the State of Montana.

The Character of Meriwether Lewis
Explorer in the Wilderness

Clay S. Jenkinson
Foreword by David Nicandri

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November 2011 We Proceeded On — 25
"Well, I know what I don't want to be when I grow-up!" shouted Laura Gunderson, her voice echoing off the high black bluffs overlooking the Yellowstone River. A junior from Montana State University—Billings, Gunderson had spent the better part of a cold and blustery Saturday in March meticulously excavating a 1-meter by 1-meter unit of ground.

Gunderson’s frustration was understandable. When she signed up for the MSU-Billings course—Historical Archaeology in the Americas—digging dirt in the rain was not what she imagined she would be doing. She had heard about the class project, a real excavation looking for the camp where Captain William Clark built two canoes to descend the Yellowstone River that was being conducted in conjunction with the Rochejhone Chapter of the Lewis and Clark Heritage Trail Foundation and Montana State University—Billings. What she envisioned, however, was more along the lines of archeology as it is depicted in the popular media with wild adventures and derring-do portrayed in Indiana Jones or Lara Croft Tomb Raider. Even “Time Team,” a PBS reality series that follows archaeologists excavating actual dig sites, condenses the mundane work of archaeology into a concise and entertaining forty-five-minute program.

The reality is that there are hours of meticulous work involved, often chasing dead ends. Gunderson discovered this. She spent the better part of a day, carefully excavating a layer from a 1-meter by 1-meter unit laid out over an area where precise scientific instruments suggested the natural geology may have been modified by humans. What sustained her? The hope, of course, that she would find a remnant of Clark’s camp—an axe head, musket ball, or uniform button. Instead, after hours of digging, she found a two-inch braided steel cable.

The Prologue: To Dig or Not to Dig?

Unlike the movies, where archaeologists jet off to exotic countries, follow clues on an ancient map, and save precious objects from the villains, real archaeologists spend months of chair time. They have to get funding for projects by researching, writing, and rewriting grant applications. Once in the field, an archeologist must map the site. Then, he or she must take detailed field notes while removing thin layers of solid dirt from perfectly square holes.

All this may not make good movies—but it makes for good science. Since a site can only be excavated once, every bit of information must be extricated for not only the excavator’s interest but those in the future who are
interested. Thus, the need to preserve as much data as possible is always paramount for other scholars who may wish to study the site.

When I was designing the research agenda for Captain William Clark's canoe camp, I had the usual financial, logistical, and ethical concerns. But Clark's Canoe Camp project had an added dimension: The history of the Corps of Discovery is sacred for some people and the desire to prove that the site is or is not associated with their journey was potentially very charged.

As a professional archaeologist, therefore, I had to weigh several ethical concerns. First I needed to determine if the site would be better served by leaving it unexcavated. Archaeology is destructive by nature and to excavate the site is in essentials to destroy it. Most archaeologists recognize that excavation is usually a last resort. The best thing is to do, scientifically, is to leave the site untouched. Sites that are threatened by development are excavated—something I became familiar with after years of working in the cultural resource management field. This site, however, was not threatened by human development.

Instead, Clark's Canoe Camp was threatened by erosion because of its proximity to the Yellowstone River. Aerial photographs over the past ten years indicate that parts of the site have eroded by as much as eight feet. In fact, a sizable portion of it may already have been lost. Since Clark's camp in 1806, the river has eroded more than 150 feet of land in some places. Thus, ethically the excavation of the site was justified in this sense.

However, I had another ethical question to consider. An old archaeology joke goes something like this: When a typical site is excavated and the results presented to the public, someone may ask, "Who cares?" The pithy answer is "Well, me and about seven other people." This site, however, was different. Because it concerned the Corps of Discovery, excavating could draw unwanted visitors to this site who could cause damage or create problems for the two private landowners who had been so accommodating.

We tried to mitigate this ethical concern by keeping the exact location known to the few people who worked on the site. While we granted the interviews about the dig—we took great efforts to keep location vague. Final results will be published in peer-reviewed journals, but the exact location, if proven, will be known to only a few people who actually worked on the site and were educated about these concerns. The site will also be on file in the Montana State Historic Preservation Office but only legitimate researchers could access its location.

In addition, publicity was almost a certainty at some point, though categorically not desired since it might also attract unwanted visitors to the site. Ivor Noel Hume, a pioneer in American historical archaeology, once said that there is no scientific reason to have publicity about a site while excavations are still on going, and I unconditionally agree with him. However, he also recognized that sometimes it cannot be avoided, particularly when those providing funding desire positive exposure. Both Montana State University—Billings and the Rochejhone Chapter, who provided the bulk of the funding for the project, had a stake in having some favorable coverage from the project. Thus, I reluctantly agreed to an article in the Billings Gazette provided that the exact location not be disclosed and there be specific mention of the desire to respect the landowners’ rights.

We then created a research plan to recover as much information with as much site mitigation as possible. We simply needed to have a plan that would excavate the site in a scientifically sound manner. When we received funding from MSU—Billings as well as the Rochejhone and Headwater chapters of the Lewis and Clark Heritage Foundation, we laid out the comprehensive procedures that we followed in the field. We rounded up students in our Historical Archaeology class and in an effort to nurture the relationship between the Foundation and the Boy Scouts of America, we also asked for help from Troops 2, 44, and 23 in Billings.

**Sneaking A Peek: Geophysical Analysis**

We first mapped the site and laid out of grid of perfectly square 20-meter by 20-meter squares. Tim Urbaniak, MSU—Billings professor of drafting and design helped with this. Since he is also an archaeologist, Tim helped us use two geophysical instruments to “peek” below the surface before excavation. The first, a fluxgate magnetometer gradiometer, measures minute differences in the earth's magnetic field. Measured at 1-meter intervals along a straight line, it took readings of low-frequency electromagnetic readings called nanotesla (400 for each 20-meter grid). A computer program extrapolates the data and creates differently colored shapes or color anomalies recorded below the surface. Based on geography of obstructions, we were able to record seventeen full grids and ten partial grids. The second, a soil resistance meter, takes ohms-readings through small probes that send an electrical current through the soil, again with one reading for every square meter of soil. Allowing time for recording the data—the process is much slower than the magnetometer. To date, we’ve recorded four full grids
Students and volunteers work on excavation units on the southern part of the site.

and two partial grids. Both instruments reveal the site's underlying geology, both natural and man’s modifications to it. Because of the different compaction of the soil, for example, the instruments can often detect walking tracks, fire pits, building foundations, or other features. The magnetometer is also sensitive to ferrous objects. Any metal artifact will provide a distinctive reading, but depending on the iron content of the soil, the magnetometer also detects places where fire has oxidized the soil.

The geophysical measurements are a good way to find places where the environment has been modified—where there have been trenches, post holes, graves, or buildings. When mapped using computer technology, the results looked something like a Rorschach test. Patterns often become evident, although it is frequently difficult to distinguish between the natural geology and manmade modifications. I wished we could read the results like a treasure map—with a big X pointing to the spot where we needed to look, but that was never the case. Yet, they can give us an idea of the direction in which we may want to head.

DEAD ENDS, PROMISING LEADS

At a few locations at the Clark Canoe Camp, the magnetometer directed us to places we were interested in excavating. The magnetometer showed us a few locations that appeared promising and pointed us to places where we might want to excavate. There were two very straight lines of particularly high readings, most likely ferrous objects. One ran roughly parallel to the current riverbank, another almost true north and south under a two-foot berm along the section line. The latter was particularly telling because it was likely a fence associated with more modern landownership. The first, we hypothesized was probably a fence as well.

Still, we needed to test our hypotheses. We discovered that the north-south anomaly was indeed a barbed wire fence from a high water channel located at the site’s northern end, sparing us the time and effort of excavation. The second anomaly was the same, even though it had a different orientation. I was certain it was a modern fence, not one associated with the Corps of Discovery, but we needed to explore it anyway. Floods have affected areas of the site differently over the years and the two hypothesized fence lines could provide a base line for the level of the land’s late nineteenth- and early twentieth-century agricultural use. This knowledge, in turn, would help us determine the minimum depth we have to dig to find evidence of the Corps.

I knew this before I directed Laura Gunderson to dig. Nevertheless, I didn’t want to take the fun out of digging a perfectly square 1-meter by 1-meter test plot. But to everyone’s surprise, what she unearthed was not another barbed wire fence. It was a very large braided steel cable. The magnetometer readings indicated that it is at least 300 feet long and probably much longer. The cable was the first great mystery of the site. The landowners had no idea what it was used for. I consulted engineers from the Army Corps of Engineers and the Tennessee Valley Authority who had no explanation either.

In another area, the magnetometer results gave us more nebulous but linear readings that ran parallel to the Yellowstone River in Clark’s day but not today. The river changed course many times in the last two hundred years and the main channel today is oriented more north-south than it was even just a century ago. When Clark was in the area, much of it ran more northwest-southeast (see Ralph Saunders’s article). Even more exciting was that a second linear anomaly, thinner and less nebulous, that ran nearly perpendicular to the first and to Clark’s river; it also intersected the first anomaly in a giant T. It wasn’t an ‘X marks the spot,’ but it would do. They appeared to perhaps be an area of compaction below the soil and the near right angle of the anomalies made us hopeful that they were manmade rather than natural.

As promising as this was, patience is the rule in
archaeology, to the chagrin of Indiana Jones. Before we broke ground anywhere, we always had to do a soil resistivity survey first. That was even more exciting as it not only confirmed the magnetometer results because the same general pattern was found using the different instrument, but it also revealed a large two-meter diameter near-perfect circle right at the intersection of the T where the electrical resistance was significantly less—something not visible with the magnetometer. It looked more and more manmade. The fact that it was aligned with the Yellowstone River as it was during Clark's July 1806 stay was even better. We had our first target to explore.

**BREAKING GROUND**

It was March 2011—more than halfway through our spring semester—before we broke ground. We focused on the area near the T intersection on the southeastern part of the site and over what turned out to be the steel cable to the northwestern part of the site. The latter was abandoned fairly quickly so that most efforts could be directed toward another T anomaly. When the semester ended, and the students thinned out, excavations became more sporadic but a few hardy students continued to volunteer. The volunteer ranks swelled with the arrival of Boy Scouts from Troop 2 in Billings in early May. They continued working on the projects we had started, but also began working in a new area near another soil resistivity anomaly and a concentration of metal detector hits near the center of the site some 250 feet away. My former high school teacher, an active member of the Headwaters Chapter of the LCTHF, joined us for a day at the site, which was a great pleasure for me. I owe several people a debt of gratitude in my educational journey, and it was a pleasure to be able to repay at least one of them.

At the T intersection, we found a roughly circular concentration of charcoal. Was this a campfire? Was it used by Corps as they hollowed out their canoes? It is too early to tell but further laboratory tests will help us date the charcoal more accurately to find if it is a promising lead or just another dead end. But at the central part of the site, we found something much more promising. So promising, in fact, that three students braved the unusual torrential May rains this spring in an effort work one more day to find that elusive proof we’ve been looking for before the flood waters rose. It was a miserable day and I applauded their efforts. It is a small circular lead object that appears to be a musket ball. Unfortunately, it doesn’t match any of the known calibers of the weapons taken on the expedition—a discouraging fact, but since there is no comprehensive list of weapons, particularly private weapons, it might be promising.

The 2011 field season was interrupted by the unusually wet spring and high flood waters of the Yellowstone River, which made getting to and working at the site dangerous. We continued fieldwork later in the summer once the flood waters receded. Two more Boy Scout troops came to the site in the late summer, and we concentrated our efforts in the area near the musket ball find but nothing more was found. But given the painstakingly slow nature of archaeological work, we’ve really only begun to scratch the surface. Next spring, excavations will resume. Volunteers, particularly Boy Scouts and former students, have offered to assist in the mundane work that will reveal the story of this site, whatever it may be. It seems clear that we were on the right track, but we aren’t there yet.

**GOOSE BUMPS**

Clearly archaeology is making Clark’s often-overlooked journey down the Yellowstone come alive for a new generation. If it turns out to be Clark’s camp, the site has a unique story to be told, but it can only be uncovered through the meticulous work that is archaeology. Several of those college students and Boy Scouts, who dug in the rain and mud to work, found that archaeology is interesting in ways not depicted in the movies. “To stand on this place, to try and imagine it two hundred years ago, that’s absolutely amazing,” said Mark Hutchinson, a graduate student at MSU-Billings. “I knew the general story, but to be here, to imagine them walking right here, working in the summer heat, and even the Indians standing on that bluff or stealing their horses—it is really amazing.”

Archaeology was exciting not for its high adventure and drama, but because it connects the people with the past in a remarkably personal way through the “stuff” that people have used in the past. Why else would someone take a day off work and volunteer to sift mud through a screen in pouring rain? It was thrilling to touch the things that those living hundreds of years ago had touched. “To be one of the first people to hold something that maybe hasn’t seen the light of day for two hundred years, something that maybe Clark or Sacagawea touched,” said Bed Nordlund, a MSU-Billings junior. “It gives you goose bumps. It makes it all worth it.”

Tom Rust, a native of Montana and an assistant professor of history at Montana State University—Billings, has a doctorate in archaeology and ancient history from the University of Leicester in Great Britain.
Buckley Serves as the LCTHF 2011-2012 President; New Board Members

The executive committee of the Lewis and Clark Trail Heritage Foundation has been fully revised. These board members spend many hours each year guiding the Foundation’s work. They travel to board meetings at their own expense and lead committee work in order to carry out Foundation policies and practices.

Executive Committee

Jay Buckley of Orem, Utah, steps up as president of the organization at a crucial time. An associate professor of history at Brigham Young University, Buckley has written a new book, Zebulon Pike, Thomas Jefferson, and the Opening of the American West that will be published in March 2012. Other publications include his award-winning monograph, William Clark, Indian Diplomat (2008) and he co-authored with Jim Holmberg By His Own Hand? The Mysterious Death of Meriwether Lewis (2006). He was the 2004 Scholar in Residence at the William Sherman Library and Archive in Great Falls. Jay has served on the Foundation Board and the WPO Editorial Advisory Board since 2007.

Bob Gatten of Greensboro, North Carolina, is Professor Emeritus of Biology at the University of North Carolina at Greensboro. In October 2011, Bob was chosen to serve as president-elect when the position became vacant. He served two terms as president (1994-1996) and was a founder of the National Council of the Lewis and Clark Bicentennial. He identified the land owned by the Clark family in Carolina County, VA, on which William Clark was born, and has served as historian on Lindblad Expeditions’ trip In the Wake of Lewis and Clark.

Margaret Gorski of Stevensville, Montana, is the regional recreation program leader for the U.S.D.A. Forest Service for the Northern Region, based in Missoula. She has worked for nearly 35 years in various assignments at a regional level and in three national forests and three national parks in the West. Margaret was the national coordinator for the Forest Service in their activities associated with the Lewis and Clark Bicentennial from 1998-2006. She was first elected to the Foundation Board in 2008, and has returned as the Vice President.

Jerry Garrett of St. Louis, Missouri, will serve once more as treasurer. Balancing a career in accounting with a passion for history, Jerry also served as treasurer of both the Foundation and the National Council of the Lewis and Clark Bicentennial. He also chairs the Foundation’s Governance Committee. In late summer 2011, Jerry once again introduced a cross-country bus tour of newcomers to the Lewis and Clark story during a thirteen-day journey to key sites.

Larry McClure of Tualatin, Oregon, will serve another term as secretary. A retired education researcher, Larry is past president of the Oregon Chapter and coordinated the 2005 LCTHF annual meeting in Portland. A member since 1998, Larry was elected to the board in 2006 and then as secretary in 2008. He coordinates content for the Foundation’s website and volunteers as director of Tualatin Heritage Center in his hometown.

Ken Jutzi of Camarillo, California, worked for 35 years in Navy-related research, development, and management. He brings his talents to initiate a new Internet-based Information Management System and a new LCTHF website. Former president of the California Chapter, he is also a member of Portage Route and Ohio River chapters. He chairs the LCTHF Awards Committee. Ken was re-elected to the board in 2011. Jutzi has traveled the entire Lewis and Clark National Historic Trail.

Barb Kubik of Vancouver, Washington, serves on two committees, one focusing upon education and scholarship and the other focusing on regional and annual meeting planning. She is also a member of the WPO Editorial Advisory Board. As the historian for the Meriwether Project design team, she is assisting with the creation of a computer role-playing game based on the Corps of Discovery. Barb also works on “The Journey Book”—the educational component to The Confluence Project. Barb and Rennie Kubik are members of the Washington, Idaho, and Oregon chapters. Barb is the Washington State chapter president. She and Rennie have two grown sons, Erik and Alex.

Gary Moulton of Lincoln, Nebraska, is professor emeritus from the University of Nebraska–Lincoln and editor of the 13-volume The Journals of the Lewis & Clark Expedition. He began this 20-year editing project in 1979 with support from the Foundation, UNL Center for Great Plains Studies, the American Philosophical Society, and the National Endowment for the Humanities. He was re-elected to the Board in 2010.

Ron Laycock of Benson, Minnesota, who retired from a career in human services and public administration, has devoted himself to preserving the history of Lewis and Clark. This interest was sparked when he taught Elderhostels and worked as a historian on bus tours of the Lewis and
Clark National Historic Trail. He worked as a historian on numerous canoe trips through the White Cliffs area of the Missouri River. A member of the LCTHF since the mid-1980s, he has attended 23 consecutive annual meetings, served as 2003–2004 president, and received the Foundation’s Distinguished Service Award.

Philippa Newfield of San Francisco, California, was elected to the board in October 2011 to fill a vacancy. She and her husband, Phillip Gordon, have traveled the trail from the Mississippi River to the mouth of the Columbia and look forward to exploring the Eastern Legacy. An anesthesiologist by profession, she is interested in the art associated with the expedition and works with her husband to organize ongoing photography exhibits at the Roosevelt County Library on the trail in northeastern Montana. She is active in the California Chapter.

Jim Rosenberger of Verona, Wisconsin, joined the Foundation after reading Undaunted Courage. He has attended every annual meeting. Jim is president of the Badger State Chapter and currently chairs the Foundation’s Membership Committee. He was appointed to fill a board vacancy in 2010. He retired after a 30-year career in the insurance industry.

Clay Smith of Great Falls, Montana, had a 23-year career in the Air Force and spent 11 years in higher education administration. Clay became immersed in the Lewis and Clark story in and around Great Falls, where he served as chair of the 2008 LCTHF annual meeting. He has served three years as Foundation treasurer and two months as president. He was appointed to fill a board vacancy in October 2011.

Bill Stevens of Pierre, South Dakota, was elected to the board in 2006 and re-elected in 2009. President of the Encounters on the Prairie/Central South Dakota Chapter, Bill has 18 years experience in state government, including executive fiscal aide to three South Dakota governors and a legislative fiscal analyst to the South Dakota Joint Appropriations Committee. He owns Stevens Video and annually guides a Lewis and Clark cruise on the Missouri for eight hundred students.

Dick Williams of Omaha, Nebraska, is a 35-year veteran with the National Park Service. He spent the last 15 years of his career as manager of the Lewis and Clark National Historic Trail. He was instrumental in many bicentennial initiatives, such as the nationwide tour of the Tent of Many Voices. Dick has served on the board since 2007 after retiring from NPS. He is a member of the Mouth of the Platte Chapter which hosted the Foundation’s 2011 annual meeting in Omaha.

Annual Meeting in Omaha, Nebraska

The forty-third annual meeting for the Lewis and Clark Trail Foundation was held in Omaha, but not without some trials and tribulations. The Missouri River was out of its banks in the Omaha and Council Bluffs area for 100 days. Hydrologists who study such events said that it was a 100-year, some even said a 500-year flood.

Before and after the conference, there were some interesting trips to museums in Bellevue, Nebraska, and Glenwood, Iowa, the Squirrel Cage Jail and the Dodge House in Council Bluffs, the Buffalo and Elk Ranch by Niobrara, Nebraska, and the Great Platte River Road Archway at Kearney.

In Nebraska City, members toured the Lewis and Clark Missouri River Basin Interpretive Center. Matt Jones of the Otoe-Missouria Nation was welcomed at the center. On Sunday, Clay Jenkinson presented an interesting program at Joslyn Art Museum about the paintings of Karl Bodmer as he accompanied Prince Maximilian.

Back in Omaha, a business meeting was held where all LCTHF members voiced their ideas and opinions. Stephanie Ambrose-Tubbs presented a lecture on 'Miscreants in Lewis and Clark History.' Two local Mouth of the Platte Chapter members, Kira Gale and Neal Ratzlaff, presented lectures on ‘Council Bluffs and the Upper Missouri’ and ‘The Corps’s Observations of Nature,’ respectively. In the evening, Tim Cowman discussed the Missouri River Corridor before and after the time of the Lewis and Clark Expedition.

The last two days of the meeting were held outside Omaha at Sioux City and Onawa, Iowa, and at Nebraska’s Fort Atkinson State Historical Park. On the first day, everyone visited Sioux City to see the Lewis and Clark murals at a shopping mall, then all enjoyed lunch and the Omaha Nation school band at Ponca State Park. Spirit Mound was next, and many enjoyed the 0.8-mile walk to the top. On the last day, there was a re-enactment of the First Council at Fort Atkinson, Nebraska, as well as a visit to the Western Historic Trails Center in Council Bluffs to see and hear Darrel Draper (George Dreyer) and Butch Bouvier.

The annual meeting concluded with a banquet and a keynote address by James Ronda on "First Encounters, Second Looks."

Next year’s annual meeting will be held at Clarksville, Indiana, and we hope all will attend.

Survey sheets have been mailed to those who attended the meeting. At this time the information from the survey is not complete, nor are the final budget figures. Hopefully this information will be available to everyone soon.

Della Bauer
Past President, Mouth of the Platte Chapter, Inc.
Historic trails: Enhancing the Benefit to Communities

BY STUART MACDONALD

Supporters of historic trails are well aware of the potential economic benefits that visitors bring to our sites. There is also a lot that can be learned from recent efforts in the world of "dirt trails." With all kinds of trails, the perennial challenge is to raise funds, maintain sites, engage volunteers, and gain the support of communities as well as public agencies.

It is worth looking at how much Americans (and foreign visitors) spend on tourism related to our public lands. A recent study from the Department of the Interior entitled "Economic Contributions 2011", measures the importance of national parks and Bureau of Land Management areas to the economy.

The 437 million recreational visits to Interior-managed lands in 2010 supported more than 388,000 jobs nationwide and contributed over $44 billion in economic activity. Many of those jobs were in rural communities, including 15,000 jobs in Utah, 14,000 jobs in Wyoming, 9,000 in Colorado, and 8,000 in Arizona.

The Santa Fe Trail Scenic Byway Economic Impact Study of 2000 looked at the economic impact of the 852,000 visitors to the Santa Fe Trail Scenic Byway. According to the study, "visitors who were directly influenced to visit the area as a direct result of the byway generated nearly $88 million in direct and indirect spending in communities and counties along the Santa Fe Trail."

COMMUNITY SUPPORT

Historic trails, such as the Lewis and Clark National Historic Trail, can have a number of positive effects on local and national economies. Communities adjacent to historic sites, as well as other public lands, benefit from trails and other forms of access to those lands. Much of the investment in maintaining and creating trail systems comes from volunteers and donations from businesses. For quite a few years, towns worked on identifying recreation resources, creating systems of trails, and making them more available through maps, signs, marketing, events, and tours.

The Economic Impacts and Uses of Long-Distance Trails, published in 1998, found that visitors to the Overmountain Victory National Historic Trail generated $22.4 million in total industrial output, $12.4 million in total income and $14.1 million in total value added for the 15 Trail counties. A total of 521 jobs were estimated to be supported in the Trail counties by the existence of these OVT sites. "The biggest beneficiaries of this total economic impact were the eating and drinking, retail, and hotel and lodging industries. Visitors to the sites along the OVT spend a significant amount of money on their trips; there is a large number of nonresident visitors to these sites, and they spend at relatively high levels in the Trail counties."

A NETWORK OF TRAIL TOWNS

One outstanding model is the Trail Town Program along the Great Allegheny Passage, a 141-mile system of trails from Cumberland, Maryland, to Homestead, Pennsylvania. The goal of the program is to maximize the economic potential of trail tourism by taking a regional approach to sustainable development—indeed, the program report stated that its "primary measure of success is vibrant downtowns with thriving businesses creating jobs in these communities."

Annual direct spending attributed to the 800,000 annual trail visitors was $40.8 million in 2008, up from $7.26 million in 2002. Since 2007, 93 new trail-related businesses opened in the Trail Towns while 19 businesses closed, for a net gain of 74 new businesses. Even in these difficult economic times 77 percent of businesses opened since 2007 remain in operation.

For businesses that depend on tourism the goal is to ensure that "trail users can venture off the trail to enjoy the scenery, services, and heritage of the nearby community with its own character and charm." Basic elements of a Trail Town strategy include:

- Enticing trail users to get off the trail and into your town
- Welcoming trail users to your town by making information about the community readily available at the trail
- Making a strong and safe connection between your town and the trail
- Educating local businesses on the economic benefits of meeting trail tourists’ needs
- Recruiting new businesses or expanding existing ones to fill gaps in the goods or services that trail users need
- Promoting the “trail-friendly” character of the town
- Working with neighboring communities to promote the entire trail corridor as a tourist destination

American Trails is very interested in how others, including those along the Lewis and Clark National Historic Trail, are dealing with this important issue. We believe that historic preservation as well as public land stewardship and recreation are crucial to improving our economic situation.

Stuart Macdonald is the magazine and website editor for American Trails. For more on how trails contribute to our local and nationwide economies, see www.AmericanTrails.org/resources/economics.
“Our Canoes on the River Rochehano” by Charles Fritz, 19 inches by 16 inches, oil on board