TALES OF THE VARIEGATED BEAR

The Corps of Discovery’s adventures with grizzlies

PLUS:  LEWIS’S AIR GUN: SINGLE SHOT OR REPEATER?
THE “TRUE” SOURCE OF THE MISSOURI
HAIR AND BEARDS ON THE TRAIL
Tales of the Variegated Bear
The captains scoffed at the Mandans’ reports of its ferocity — until they tangled with the “turrible” beast on the high Missouri
By Kenneth C. Walcheck

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By Donald F. Nell and Anthony Demetriades

On the cover
John F. Clymer’s painting Hasty Retreat dramatically depicts one of the many encounters between members of the Corps of Discovery and grizzly bears on the upper Missouri. For more on the explorers’ travails with the variegated bear, see Kenneth Walcheck’s article beginning on page 8 and the review of Paul Schullery’s new book on page 34. Courtesy Doris Clymer and The Clymer Museum of Art.
Bad River encounter; Crimson Bluffs

I must take issue with parts of Dr. James Ronda’s article “Tough Times at the Bad” (WPO, May 2002).

The article is about the Teton (Lakota) Sioux. As sources for this article and for his account of the Bad River encounter in his 1984 book, *Lewis and Clark among the Indians*, Ronda relies mainly on the explorers’ journals, other contemporary writings by white traders, and articles by modern scholars. Missing, apparently, are oral histories handed down by the Teton Sioux themselves. In the absence of such sources, much of what he has to say about the Indians’ attitudes, motivations, and politics remains speculative.

I also question Ronda’s view that the captains didn’t know what they were doing during this episode and came off badly as a result. He writes, for example, that “Compared to these Lakotas, Lewis and Clark were country boys in the hands of real sharpies.” It seems to me, however, that it was Clark who gained the most by not backing down, by not giving in as Black Buffalo did, and by not allowing the Sioux to control the situation.

Ronda would have us believe that Lewis and Clark were dunces who bumbled and stumbled through their adventure with no idea about the world they entered. This may be true to some extent, but it is also true that the Corps of Discovery met dozens of tribes representing many languages and cultures, and in the vast majority of those encounters the explorers succeeded in fostering remarkable relationships. Much of the credit goes to the friendliness of the Indians themselves, but Lewis and Clark and the American ideals they represented also deserve credit. Few explorers fared as well.

Finally, I dispute Ronda’s assertion that in 1804, “the politics of the northern Great Plains was every bit as complex as the politics of Washington, D.C.” This statement is apologia, not scholarship. How could the politics of Plains Indians, numbering in the tens of thousands, possibly be as complex as those of a new and evolving democracy of 5.5 million people? I know that the tribes, threatened by white encroachment, were dealing with many pressing matters in a rapidly changing context. But on the banks of the Potomac, Lewis’s mentor, Thomas Jefferson, was fighting Barbary pirates and trying to avoid war with Great Britain, the era’s superpower, while also dealing with party politics, judicial review, westward expansion, slavery, federalism versus states rights, and many other heated issues of the day.

SAM BLOBERG
Evergreen, Colo.

Missouri River site dedicated

As president of the Crimson Bluffs Chapter I want to thank WPO for its coverage of our successful efforts to protect the Crimson Bluffs, a Land and Clark landmark on the upper Missouri (L&C Roundup, May 2002).

Readers may be interested to know that we dedicated the 50-acre site on July 27. Undaunted by rain, approximately 150 people from Broadwater County and other parts of Montana arrived under cloudy skies to take part in the commemoration and to view the “remarkable bluff of a crimson coloured earth,” as Lewis described it on July 24, 1805. Enhancing the festivities were a bald eagle and a flight of white pelicans gliding over the river.

Today, the Crimson Bluffs are as beautiful as they were when the Corps of Discovery passed them nearly 200 years ago, and now that they are in public ownership they will remain in a pristine state for future generations. We are grateful to everyone who helped us celebrate this special occasion.

ROSE OLESON
Townsend, Mont.
just spent the evening with a wonderful group from the Phoenix, Arizona, area. They come every year to spend a peaceful week at Rising Wolf, a guest ranch on the south fork of Two Medicine River owned by our old friends Jim and Patti Stewart. Jim and I have talked around the ranch’s dinner table on many a long evening about my long love affair with the story of Lewis and Clark, my work with the Foundation, and my participation in the upcoming L&C Bicentennial. When he asked if I’d mind taking these folks on a tour of “Two Med” country and the site of Camp Disappointment, where Meriwether Lewis had his fateful encounter with a group of Indians (either Blackfeet or Gros Ventres of the Praire), I jumped at the chance.

My interaction with Jim and Patti’s guests brings into focus what so many members of the Lewis and Clark Trail Heritage Foundation do routinely as “keepers of the story and stewards of the trail.” To prepare them for our visit to the Fight Site I made sure they had the trail.” To prepare them for our visit to the Fight Site I made sure they had seen the August issue of WPO with Bob Saindon’s article about that “unhappy involved in the L&C Bicentennial. I reading about the expedition, and get them will follow through, do more Chapter. I’m confident that some of organization and the Grand Canyon and gave me an opportunity to encour-

The copies of WPO I left at the ranch piqued their interest in the Foundation and gave me an opportunity to encourage them to join both our national organization and the Grand Canyon Chapter. I’m confident that some of them will follow through, do more reading about the expedition, and get involved in the L&C Bicentennial. I wouldn’t be surprised to see a few show up at Monticello for the bicen-
tennial kickoff in January or in Philadelphia next August for the Founda
tion’s annual meeting.

Their visit also presented the opportunity to talk about tribal relations and the good work being done by the Bicentennial Council’s Council of Tribal Advisors (COTA) to ensure that tribal lands and cultures along the L&C Trail are respected. I made a point of reminding them that the entire evening of our tour was spent on the Blackfeet Reservation. In addition to exploring the Fight Site we looked at tipi rings and a pushkin (buffalo jump). We also talked about the critical importance of maintaining good relations with the tribal members and the ranchers whose property we crossed to get to these sites.

Taking the message to others
It was the kind of evening that is surely repeated nearly every day somewhere along the Lewis and Clark Trail—a telling of the story and a primer on stewardship, landowner and tribal relations, and the need to protect our priceless heritage. Foundation members from Charlottesville and Philadelphia to Astoria and all points between know exactly how it feels to carry our story and message to others.

I’m happy to report that, without further prompting from me, our new friends from Arizona wanted to know more about the Foundation and asked for membership brochures. We had a wonderful time, just as I know all of you do whenever you’re involved in this kind of experience in which everyone learns and grows. So from way up here in the heart of Blackfeet country, Thank you for all you are doing to ex-

—Larry Epstein
President, LCTHF

From the Directors

Spreading the word in Two Med country

The Lewis and Clark Trail
Heritage Foundation, Inc.

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The mission of the LCTHF is to stimulate public appreciation of the Lewis and Clark Expedition’s contributions to America’s heritage and to support education, research, development, and preservation of the Lewis and Clark experience.

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Lewis and Clark from different perspectives

A jagged-edged rock art reproduction hangs on the hallway wall in my St. Louis home. It was made from a latex mold applied to a petroglyph on the face of a cliff on the plains of Montana. An old friend gave it to me years ago. Although native people incised the original, the subject matter is not Indian. Instead, the image is a boat with uplifted prows at both ends, apparently constructed of planks, with two people holding oars and standing at either end. The image includes a rifle and a larger gun resting upright in the boat. Comparative dating from the site suggests that the petroglyph was made about the time the Corps of Discovery passed through Montana. While no conclusive evidence exists, it is possible that the image is an American Indian depiction of Lewis and Clark. I like to think so.

At the White House event hosted by President and Mrs. Bush on July 3, Nez Perce Tribal Chairman Sam Penny spoke of Nez Perce tribal traditions about the Corps of Discovery. As I listened to him, I thought of my petroglyph reproduction. People who are not Native Americans see Lewis and Clark from an eastern perspective even if they live in the west. Lewis and Clark were going “out there.” But the viewpoints of the unknown petroglyph inscriber and Sam Penny are distinctly different because the artist and the tribal chairman have different cultural and geographic vantagepoints. If the West was your home before Lewis and Clark struggled upriver, then the Corps of Discovery was coming, not going; arriving, not departing; and its members were wayfaring suspect strangers in your land rather than representatives of your country, your culture, and future’s destiny. These are startlingly different perspectives on the same events, facts, and people. Good people can make different meanings of past events and both can be correct. It depends on where you stand and who your people are.

Implicit in this idea is one of the powerful messages of the L&C Bicentennial commemoration. These observances can be an opportunity to reflect upon the Corps of Discovery from multiple perspectives and embrace the beautiful tapestry that is America’s heritage, and to acknowledge that all Americans count and different stories must be told and heard. It is also time to reflect upon the land traversed and described by the corps, for the land and the people who live upon it are our most precious legacy and our priceless gift to future generations. The land and its rivers and animals have changed in 200 years. Are we pleased with the changes that we and our predecessors have wrought, or is it time to contemplate course corrections that will comprise the legacy we will leave to the young and to those yet born? This bicentennial can be an opportunity to reaffirm what is best and good in our past, strengthening both our sense of identity and common purpose. But just as importantly, it is also a chance to acknowledge the burdens of the past and to make those changes in our own time that will guarantee the ingredients of a good life for those who come after us. Doing this, we more perfectly fulfill our obligations as the living generation to leave our places better than we found them by being conscientious trustees and thoughtful stewards of our legacies.

Council changes
You may all be aware that the Bicentennial Council faces severe and immediate financial challenges. We have reduced our operating costs, moved our offices to St. Louis, and are operating with a volunteer staff based at the Missouri Historical Society. Despite our austerity, the opportunities remain. The National Advertising Council has adopted the Lewis and Clark Bicentennial as its pro bono campaign, a decision that will result in tens of millions of dollars of free educational media buys. We remain committed to securing the corporate sponsorships that will underwrite Corps of Discovery II, which will debut during the signature event at Monticello in January. We will maintain the Council’s Web site and plan to expand it into a portal to all Lewis and Clark information on the Web. While we have dramatically reduced our costs, we have not reduced our essential activity.

As a historian, I know that all work rests on foundations built by others. I am deeply grateful to the council’s past president, David Borlaug, members of the council’s board of directors, the former staff of the council, and to the unwavering support of the Lewis and Clark Trail Heritage Foundation. Without them there would be no place to begin. Collectively, the readers of WPO are a vast reservoir of enthusiasm, ideas, and support for the proposition that through this commemoration we provide for all Americans an opportunity to reflect upon a remarkable past, explore a magnificent land, and contemplate a future that we will make together. I need your ideas, support, and involvement. Please call, write, or e-mail me or Karen Goering, interim executive director of the Bicentennial Council.

—Robert R. Archibald

Bob Archibald (rra@mohity.org), the new president of the Bicentennial Council, is president of the Missouri Historical Society (MHS). Both he and Karen Goering can be reached care of MHS, P.O. Box 11940, St. Louis, MO 63112.
Jefferson West ad
Eyes and ears along the Lewis and Clark Trail

The snow lies deep on Packer Meadow, protecting for much of the year one of the most pristine sites along the Lewis and Clark National Historic Trail. In winter, at least, it’s safe from abuse by all-terrain vehicles (ATVs) of the sort that occurred one day last summer.

Packer Meadow is a beautiful example of a wet camas meadow. Lewis and Clark camped two miles down Glade Creek on the night of September 13, 1805, and wrote about it in their journals. They returned to the area on June 29, 1806, where it merited a second mention by Clark: “here is a pretty little plain of about 50 acres plentifully Stocked with quawmash [camas] and from appearance this forms one of the principal Stages of the indians who pass the mountains on this road.”

On the afternoon of last August 17, Kathy Lloyd and other members of the Montana Native Plant Society were preparing for an Elderhostel class on the plants of the Lewis and Clark Expedition. As she recalls, “After a pleasant day identifying plants in the meadow and reading from the Lewis and Clark journals, we were preparing to leave when two ATVs roared by us and traveled down the middle of the wet meadow, disappearing up a side drainage. They reappeared, again tearing down the center of the meadow.”

Thinking quickly, members of the group snapped photos of the ATVs in action. “They were great photos,” said Joni Packard, the U.S. Forest Service district ranger at nearby Powell Ranger Station, “but I wish they would have called us right away. We’re just 20 minutes away and might have been able to get someone up there and apprehend the people who did this.”

Fortunately, said Packard, the damage to the meadow caused by the ATVs wasn’t too bad. “It wasn’t dug up or churned up.” Less fortunately, despite the photos the drivers couldn’t be identified—they were wearing helmets, and their ATVs didn’t have license plates. When Lloyd and her crew checked the area they found no trailers or other rigs for transporting ATVs.

“We were shocked and upset by this wanton disregard for a priceless natural and historic landmark,” said Lloyd. “ATV use is never appropriate in a wet meadow and is certainly not to be condoned in a place bearing such historical, cultural, and natural values.” Packard concurred. “This area is closed to motorized use,” he said, adding that signs declaring the area off limits had been pulled down or otherwise vandalized but will be replaced.

Prompt reporting is key

The incident happened on a Sunday afternoon. “Even so,” said Packard, “people should still call us right away. Even if they just call 911, the sheriff’s department can dispatch our officers or respond to the call themselves. Visitors to the trail are our eyes and ears when we don’t have law enforcement officers in the immediate area. We need their help.” It’s especially important that eye witnesses immediately report vandalism or other violations or desecrations. Forest Service investigators believe it was in September 2001 that vandals struck at the Smoking Place, on Motorway 500 of the Lolo Trail. In that case, rock cairns built over many generations by the Nez Perces were destroyed. There were no witnesses, and the case remains unsolved.

Idaho author Jim Fazio calls Packer Meadow one of his favorite Lewis and Clark sites, and he’s understandably disheartened at the news of the ATV vandalism: “Packer Meadow is one of those wonderful places where you can stand and easily envision the expedition passing through. Fortunately or unfortunately, it is also one that is easily accessible to motor traffic. Until now, it has been respected by everyone and has lasted into the 21st century without damage—despite use by hikers, hunters, horseback riders, and Native Americans digging camas roots. I’m grieved to learn that ATV riders would have such disrespect for a special place that they couldn’t control themselves and stay on the road.”

There are few sites along the L&C Trail that give visitors a sense of place similar to what the captains might have experienced 200 years ago. Packer Meadow is one of them, and while it would be satisfying to apprehend the vandals of August, it’s our job to educate the traveling public and our friends and neighbors about the need to respect the trail and keep off sensitive and fragile sites. As Packard points out, we are indeed the eyes and the ears of the Forest Service—and of the National Park Service, the Bureau of Land Management, the U.S. Fish and Wildlife Service, and other land-management agencies charged with protecting the trail. If you witness an act of vandalism or other crime on the Trail, call the nearest ranger station or 911.

—Jeff Olson
Trail Coordinator

Jeff Olson can be reached at trail@lewisandclark.org (P.O. Box 2376, Bismarck, ND 58502; Tel.: 701-258-1809.)
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Tales of the Variegated Bear

Lewis and Clark scoffed at the Mandans’ reports of its ferocity — until they tangled with the “turrible” beast on the high Missouri

by Kenneth C. Walcheck

When the Corps of Discovery arrived there two centuries ago, the Missouri near present-day Great Falls, Montana, was a wild boulder-strewn river cascading over rapids and five falls and surging through a landscape teeming with elk, bison, and antelope. Its willow and cottonwood bottomlands were also home to numerous grizzly bears.

It was at the Great Falls of the Missouri on June 14, 1805, that Meriwether Lewis, well ahead of the rest of the party, came face to face with a grizzly. The captain had just shot a buffalo and was waiting for it to die when he noticed the bear lumbering toward him just 20 paces away. Violating a cardinal rule of wilderness travel, Lewis had neglected to reload immediately so was holding an empty rifle. To his dismay he noticed there wasn’t a tree within 300 yards nor any depression in which he might conceal himself while recharging his gun. His only usable weapon was his espontoon, a walking staff with an iron spike. Lewis began to retreat, but he had hardly moved when the bear charged at him “open mouthed and [at] full speed.” Lewis sprinted 80 yards to the river and plunged into the waist-deep water, then turned and “presented the point of my espontoon” toward the bear as it pulled up at the water’s edge.

Then, to Lewis’s amazement and relief, as suddenly as it had charged the bear turned tail and galloped off across the open plain. Lewis later wrote that “the cause of his allarm still remains with me misterious and unaccountable … I feelt myself not a little gratifyed that he had declined the combat.”

This was neither the first nor the last encounter Lewis and his fellow explorers would have with this largest and most feared of North American predators during their 28 months on the trail. The vast majority of sightings took place along the game-rich upper Missouri. As Lewis noted, the grizzlies “lie in [wait] at the crossing places” of elk and bison, where they were especially vulnerable to attack. The biggest concentration occurred at the Great Falls:

As the buffaloe generally go in large herds to water and the passages to the river about the falls are narrow and steep the hinder part of the herd press those in front out of their debth and the water instatly takes them over the cataracts where they are instantly crushed to death without the possibility of escaping. in this manner I have seen ten or a douzen disappear in a few minutes. their mangled carcases ly along the shores below the falls in considerable quantiies and afford fine amusement for the bear wolves.
“Saw a large brown bear. . . he took the River and was near catching the Man he chased in . . . one of the hunters Shot him in the head.”
— John Ordway, May 14, 1805, near the mouth of the Musselshell River.
and birds of prey; this may be one reason and I think not a bad one either that the bear are so tenacious of their right of soil in this neighbourhood.³

Grizzlies were so numerous and aggressive at the Great Falls that bear alertness became a preoccupation. The captains ordered the men to sleep with their guns close at hand and forbade them to venture along the river. Seaman, Lewis’s Newfoundland dog, did his part by barking whenever a bear came near camp.

During the previous winter the Mandans and Hidatsa had told the captains that the buffalo country abruptly ended beyond the Great Falls. Without bison to feed on, the ranks of bears also thinned considerably. Once the explorers left the Falls they encountered only four other grizzlies along the river.⁴

GRIZZLY ORIGINS AND EARLY ACCOUNTS

The grizzly evolved in Siberia and passed from Asia into North America across the Bering Land Bridge during the last ice age. Spreading south, it eventually occupied a swath of territory from Alaska to central Mexico and from California to Minnesota. Evolution on the cold, open, windswept tundra favored size and ferocity (a big body is better at holding heat, and an aggressive nature comes in handy when there is no place to hide). As nature writer Thomas McNamee puts it, “The American grizzly’s ancestors were the biggest, meanest specimens Eurasia had to offer.”⁵

Like its smaller cousin, the black bear, the grizzly is omnivorous—in addition to meat killed or scavenged it eats fish and also berries, roots, and other vegetation. A typical adult weighs 500 pounds, but despite its bulk it can run in bursts of well over 30 m.p.h. and at a sustained clip exceeding 20.⁶

Grizzlies appear in the literature of exploration beginning in 1666, when the French missionary Claude Jean Allouez mentioned Indian accounts of man-eating bears “of frightful size, all red, and with prodigiously long claws.”⁷ In the two decades before Lewis and Clark set out for the Pacific, the Canadian fur traders Alexander Mackenzie and Alexander Henry noted the grizzly’s presence, respectively, along Peace River, in present-day Alberta, and in the Red River valley of North Dakota.⁸ But it remained for Meriwether Lewis—he of the observant eye and active pen—to provide the wealth of detail that would lead to the formal scientific description supplied by Philadelphia naturalist George Ord in 1815. Ord gave the grizzly its Latin moniker Ursus horribilis, “horrible bear.” Much later, taxonomists would lump together the grizzly and the larger, but closely related, Alaskan brown bear and Eurasian brown bear under the species name Ursus arctos, but Ord’s evocative label survives in the grizzly’s subspecies designation, Ursus arctos horribilis.⁹

Individual grizzlies vary markedly in color according to age, sex, and locality. In their journals, Lewis and Clark described bears as white, brown, gray, red, yellow, black, or grizzly (variously spelled and meaning gray or grizzled). Lewis wondered if the bear’s myriad color phases represented as many as 20 separate species. Ultimately he concluded they were a single species, an insight that came to him on May 14, 1806, while waiting in a Nez Perce camp for snows to melt in the Bitterroots. Perhaps, he wrote, “it would not be unappropriate to designate them the variagated bear.”¹⁰

A “TURRIBLE” ANIMAL

The Corps of Discovery’s first encounter with the variagated bear took place on October 20, 1804, on the Missouri near the mouth of Heart River, North Dakota, as the explorers were nearing the Mandan villages. The one-eyed boatman, Pierre Cruzatte, wounded a grizzly, or “white bear,” as Lewis recorded, and “being alarmed at the formidable appearance of the bear” took off, dropping his gun and tomahawk. Upon retrieving these items Cruzatte “found that the bear had taken the oposite
LEWIS & CLARK GRIZZLY ENCOUNTERS: KILLED, WOUNDED, SIGHTED

k = killed / w = wounded / s = sighted

OUTBOUND

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CLARK (YELLOWSTONE RIVER)

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<td>1</td>
<td>1 k</td>
</tr>
<tr>
<td>8:190</td>
<td>7.16.06</td>
<td>2</td>
<td>2 s</td>
</tr>
<tr>
<td>8:205</td>
<td>7.19.06</td>
<td>2</td>
<td>2 w</td>
</tr>
<tr>
<td>8:208</td>
<td>7.20.06</td>
<td>1</td>
<td>1 s</td>
</tr>
<tr>
<td>8:253</td>
<td>7.30.06</td>
<td>1</td>
<td>1 s</td>
</tr>
<tr>
<td>8:259</td>
<td>7.31.06</td>
<td>1</td>
<td>1 s</td>
</tr>
<tr>
<td>8:272</td>
<td>8.2.06</td>
<td>2</td>
<td>1 k, 1 w</td>
</tr>
<tr>
<td>8:281</td>
<td>8.5.06</td>
<td>1</td>
<td>1 k (North Dakota)</td>
</tr>
<tr>
<td>8:282</td>
<td>8.6.06</td>
<td>1</td>
<td>1 w</td>
</tr>
<tr>
<td>8:283</td>
<td>8.7.08</td>
<td>1</td>
<td>1 s</td>
</tr>
</tbody>
</table>

Subtotals, homeward 49 12 k, 7 w, 30 s

GRAND TOTALS 103 32 k, 13 w, 58 s

NOTES
1 Volume and page references are for Moulton, *Journals of the Lewis & Clark Expedition*, Volumes 3, 4, and 5. Single references are generally for the first page of the first entry. (Most bear encounters are described by more than one journal keeper.)

2 The explorers encountered grizzly tracks on October 7, 1804 in South Dakota (Moulton, 3:148), and again on April 13, 1805, in North Dakota (4:31).

3 Although counted separately, the bear reported killed may have been one of the five sighted.

4 His syntax is confusing, but Lewis appears to be talking about two bears killed—one by him and the other by Drouillard.

5 Clark's entry of July 1 (Moulton, 4:350) reporting three bears killed clearly refers to the three bears killed on June 27.

6 The entry notes sighting “Several” bears. Here and in 8:148 and 8:149, “several” has been given the arbitrary number of three.

7 Sightings of bear tracks occur after this date (August 2 and 23) as well as sightings of “bear sign” (October 30); the latter occurred on the Columbia River so almost certainly represented black bears. Also, on August 3, “some … Bear” were seen “in the bottoms.” These were probably grizzlies but aren’t counted here. On September 1, “one man shot two bear” that were not retrieved; these could have been either grizzlies or black bears and also are not counted.

8 Lewis: “two large bear together … one black and the other white.” The “black” bear is almost certainly a dark grizzly.

9 McNeal strikes bear with rifle and is treed for three hours. Sergeant John Ordway describes this incident four days after the fact in his entry of July 19 (Moulton, 9:338).

10 The entry is for “several bear.”

11 The entry reports seeing “several” bears.

12 Lewis states, “the Fieldses … killed 2 bear and seen 6 others, we saw and fired on two … but killed neither.” The two bears killed probably refer to the two shot on August 5.

13 By state: Montana, 28; Idaho, 3; North Dakota, 1.
May 11, 1805
About 5 P.M. my attention was struck by one of the Party runing at a distance towards us and making signs and hollowing as if in distress. I ordered the perogues to put too, and waited untill he arrived; I now found that it was Bratton the man with the soar hand whom I had permitted to walk on shore, he arrived so much out of breath that he was several minutes before he could tell what had happened; at length he informed me that ... he had shot a brown bear which immediately turned on him and pursed him a considerable distance but he had wounded it so badly that it could not overtake him; I immediately turned out with seven of the party in quest of this monster, we at length found his trale and persued him about a mile by the blood through very thick brush of rosbushes and the large leafed willow; we finally found him concealed in some very thick brush and shot him through the skull with two balls; we proceeded to dress him as soon as possible, we found him in good order; it was a monstrous beast, ... we now found that Bratton had shot him through the center of the lungs, notwithstanding which he had pursued him near half a mile and had returned more than double that distance and with his tallons had prepared himself a bed in the earth of about 2 feet deep and five long and was perfectly alive when we found him which could not have been less than 2 hours after he received the wound; these bear being so hard to die reather intimedates us all; I must confess that I do not like the gentlemen and had reather fight two Indians than one bear.

May 14, 1805
In the evening the men in two of the rear canoes discovered a large brown bear lying in the open grounds about 300 paces from the river, and six of them went out to attack him, all good hunters; they took the advantage of a small eminence which concealed them and got within 40 paces of him unperceived; two of them reserved their fires as had been previously concorted, the four others fired nearly at the same time and put each his bullet through him, two of the balls passed through the bulk of both lobes of the lungs, in an instant this monster ran at them with open mouth, the two who had reserved their fires discharged their pieces at him as he came towards them, boath of them struck him, one only slightly and the other fortunately broke his shoulder, this however only retarded his motion for a moment only, the men unable to reload their guns took to flight, the bear pursued and had very nearly overtaken them before they reached the river; two of the party betook themselves to a canoe and the others separated and concealed themselves among the willows, reload their pieces, each discharged his piece at him as they had an opportunity they struck him several times again but the guns served only to direct the bear to them, in this manner he pursued two of them seperately so close that they were obliged to throw aside their guns and pouches and throw themselves into the river altho’ the bank was nearly twenty feet perpendicular; so enraged was this anamal that he plunged into the river only a few feet behind the second man ... when one of those who still remained on shore shot him through the head and finally killed him; they then took him on shore and butchered him when they found eight balls had passed through him in different directions; the bear being old the flesh was indifferent, they therefore took only the skin and fleece [fat], the latter made us several gallons of oil.

June 2, 1805
Accordingly I walked on shore most of the day with some of the hunters for that purpose and killed 6 Elk 2 buffale 2 Mule deer and a bear. ... the bear was very near catching Drewyer; it also pursued Charbono who fired his gun in the air as he ran but fortunately eluded the vigilence of the bear by secreting himself very securely in the bushes untill Drewyer finally killed it by a shot in the head.

June 25, 1805
about noon Fields returned and informed me that he had seen two white bear near the river a few miles above and in attempting to get a shoot them had stumbled upon a third which immediately made at him being only a few steps distant; that in runing in order to escape from the bear he had leaped down a steep bank of the river on a stony bar where he fell cut his hand bruised his knees and bent his gun. that fortunately for him the bank hid him from the bear when he fell...
that by that means he had escaped. this man has been truly unfortunate with these bear, this is the second time that he has narrowly escaped from them.

McNeal treed by a grizzly, from the 1807 edition of Gass's journal.

July 15, 1806

a little before dark McNeal returned with his musket broken off at the breech and informed me that on his arrival at willow run he had approached a white bear within ten feet without discover him the bear being in the thick brush, the horse took the allarm and turning short threw him immediately under the bear; this animal raised himself on his hinder feet for battle, and gave him time to recover from his fall which he did in an instant and with his clubbed musquet he struck the bear over the head and cut him with the guard of the gun and broke off the breech, the bear stunned with the stroke fell to the ground and began to scratch his head with his feet; this gave McNeal time to climb a willow tree which was near at hand and thus fortunately made his escape. the bear waited at the foot of the tree untill late in the evening before he left him, when McNeal ventured down and caught his horse which by this time had strayed off to the distance of 2 ms. and returned to camp. These bear are a most tremenduous animal; it seems that the hand of providence has been most wonderfully in our favor with rispect to them, or some of us would long since have fallen a sacrifice to their farosity.


rout.” On the same day, Clark reported seeing “Several fresh track of those animals which is 3 times as large as a man’s track.”

In the lodges of the Mandans that winter, the captains heard many a cautionary tale about grizzlies. Lewis, for one, tended to dismiss these accounts. Writing on April 13, 1805, a week after departing the villages for the Pacific, he noted on the river banks

many tracks of the white bear of enormous size[.] … the men as well as ourselves are anxious to meet with some of these bear. the Indians give a very formidable account of the strength and ferocity of this anamal, which they never dare to attack but in parties of six eight or ten persons; and are even then frequently defeated with the loss of one or more of their party. … When the Indians are about to go in quest of the white bear, previous to their departure, they paint themselves and perform all those supersticious rights commonly observed when they are about to make war upon a neighbouring nation.

Lewis attributed the Indians’ fear to a lack of firepower. The “savages,” he wrote, “attack this anamal with their bows and arrows and the indifferent guns with which the traders furnish them.” This assessment seemed confirmed on April 29, in the vicinity of Big Muddy Creek in eastern Montana, when Lewis killed his first grizzly, a young male he dropped with two well-aimed balls. He concluded that for a skilled rifleman armed with a good weapon “they are by no means as formidable or dangerous as they have been represented.”

His attitude began to change a week later. On May 5, Clark and George Drouillard, the corps’s civilian hunter, fired upon a big boar grizzly and chased it into the river. The two men shot and reloaded several times. Ten balls found their mark, and five lodged in the bear’s lungs, but it managed to swim to a sandbar before dying. Noted Clark, it “was a verry large and a turrible looking animal, which we found verry hard to kill.” Lewis estimated its weight at 600 pounds and was astonished to find that its heart was as big as an ox’s.

The difficulty Clark and Drouillard had killing their grizzly speaks to the limitations of the Corps of Discovery’s firearms. Members of the expedition carried both the Kentucky rifle and either the Model 1803 Harpers Ferry rifle or a prototype of it. The Kentucky rifle’s .40- or .44-caliber balls were adequate for deer and even elk but lacked the shock power to stop a grizzly. The larger .54-caliber balls of the Model 1803 were better, but with their relatively slow muzzle velocity compared to a modern high-powered rifle they were still not up to
the task. Again and again the journals tell of the grizzly’s ability to absorb lead. Observed a chastened Lewis on May 11, after a mortally wounded grizzly chased Private Bratton for half a mile, “these bear being so hard to die rather intimedates us all; I must confess that I do not like the gentlemen and had rather fight two Indians than one bear.”

Lewis’s physiological descriptions of the bears killed on April 29 and May 5 included the curious and inexplicably erroneous statement that the male grizzly’s testicles were in separate pouches or pouches (“his testicles were pendant from the belly and placed four inches assunder in separate bags or pouches”). Lewis was such a keen and careful observer that it is difficult to understand how he made this mistake. Although against the odds, it is not inconceivable that both bears had deformed scrotums.

At the time of Lewis and Clark’s epic journey of discovery as many as 50,000 grizzlies may have wandered what is now the western United States. Now a thousand or fewer are believed to exist in isolated pockets of Wyoming, Montana, Idaho, and Washington. Much of our knowledge of the grizzly and its world at the time of first contact between Europeans and Native Americans comes from the meticulous notes of Meriwether Lewis and his fellow explorers. They passed through a land of “visionary enchantment” proyled by the great variegated bear that would one day become a symbol of so much that was lost.

Kenneth Walcheck, a Foundation member and a resident of Bozeman, Montana, is a retired wildlife biologist.

Notes

1 Gary E. Moulton, ed., The Journals of the Lewis & Clark Expedition, 13 volumes (Lincoln: University of Nebraska Press, 1983-2001), Vol. 4, pp. 292-293. All quotations or references to journal entries in the ensuing text are from Moulton, by date, unless otherwise indicated.

2 Moulton, Vol. 8, p. 150. The entry is for August 7, 1806.

3 Ibid., Vol. 4, pp. 303-304 (June 17, 1805).

4 Grizzly observations were made on July 24, 25, and 26, and August 1.


6 McNamee, p. 74.

7 Ibid., p. 35.


9 Schullery, pp. 50, 57. The subspecies designations for the Alaskan (or Kodiak) brown bear and the Eurasian brown bear are Ursus arctos middendorffi and Ursus arctos arctos, respectively.

10 After Ord scientifically described the grizzly, many years went by before that name became fixed in the language. Theodore Roosevelt opposed it, arguing that a more appropriate name would be “grisly,” meaning horrifying or ghastly. See Paul Russell Cutright, Lewis and Clark: Pioneering Naturalists (Urbana: University of Illinois Press, 1969), p. 142. Despite Lewis’s correct conclusion about one species of grizzly, he was confused by the reddish or “cinnamon” phase of the black bear, Ursus Americanus. Referring to the Nez Perces, he wrote on May 31, 1806, “I am disposed to adopt the Indian distinction with respect to these bear and consider them two different species.” Some 19th-century naturalists agreed, and over the years taxonomists have both “lumped” and “split” cinnamon and black bears. They are now regarded a single species.

11 Moulton, Vol. 3, p. 188. The journals’ first reference to grizzlies is found in Clark’s entry for September 1, 1804. He mentions a “White Bear Clift” overlooking the Missouri in South Dakota, about 25 miles below the mouth of the Niobrara River, so named by Indians for having killed “one of these animals … in a whole in it.” Moulton, Vol. 3, p. 38.

12 Firearms historians debate whether the Corps of Discovery carried a prototype of the .49-caliber Model 1796 or a cut-down version of an earlier army rifle, the .49-caliber Model 1796.

13 Ibid., Vol. 4, p. 113.

14 This is the author’s estimate. Readers should keep in mind, however, that calculating wildlife numbers is a tricky business even when dealing with existing populations, so any estimates of presettlement populations should be taken with a grain of salt. Estimates of presettlement grizzly populations in what is now the contiguous United States depend on estimates of the grizzly’s presettlement range, which vary from 320,000 square miles to 1.5 million square miles. See Daniel P. Botkin, Our Natural History (New York: Grosset/Putnam, 1995), pp. 72 and 77-78. Botkin uses grizzly sightings by Lewis and Clark along the upper Missouri (which he appears to undercount) to estimate a grizzly density of roughly 4 per 100,000 square miles, a figure that yields a total population—depending on a conservative or liberal estimate of grizzly range—of 12,000, 20,000, or 56,000. One problem, as noted, is undercounting the number of encounters, which will happen if one relies solely on the index of the Moulton edition of the journals, for not all sightings are referenced. Another problem with working from grizzly sightings recorded by Lewis and Clark is that they are random. A systematic survey of the sort made my wildlife biologists conducting population studies might well have yielded a higher density of grizzlies along the upper Missouri, which in turn would produce a higher overall population estimate.

During the 34th annual meeting of the Lewis and Clark Trail Heritage Foundation, in Louisville, Kentucky, last July, Ludd Trozpek, a rare-books dealer and longtime Foundation member, asked me to explain to him the method of loading Meriwether Lewis’s air rifle. As a collector of antique firearms and a professional consultant on the subject, I was happy to oblige.

As Ludd knew, the air rifle believed by many firearms historians to have been carried by Lewis on his expedition to the Pacific was made by Isaiah Lukens of Philadelphia. At some point after the expedition, Lukens reacquired it. This rifle, which is on display in the museum of the Virginia Military Institute, superficially resembles, and would have been loaded in a manner similar to, the flintlock rifles of the period, except that compressed air rather than gunpowder was the propellant. The Lukens air rifle has a hollow buttstock for an air reservoir. A hand pump, similar to one for inflating a bicycle tire, was used to pump air into the reservoir. Some 700 to 1,000 strokes might be necessary to bring it up to the pressure required to kill a deer at 100 yards. Once the butt-reservoir was filled, a ball was inserted at the muzzle end of the barrel and pushed home with a ramrod. The gun could then be cocked and fired. Pulling the trigger released a short burst of air that expelled the ball. The shooter reloaded the gun in the same manner described. He could fire the gun 20 or more times without recharging the reservoir, but successive firings reduced the air pressure, so that each shot was weaker than the last.

Ludd listened to my explanation, then said that he had recently come across some information indicating that it wasn’t done that way at all. I was skeptical until he showed me a page he had photocopied from the published journal of one Thomas Rodney, a political ally of Thomas Jefferson. While traveling down the Ohio in the late summer of 1803, Rodney had a chance encounter with Lewis in Wheeling. Lewis was aboard the Corps of Discovery’s keelboat, recently constructed near Pittsburgh. He too was heading downriver, on the first leg of his water journey across the continent. Rodney wrote:

Visited Captain Lewess barge. He shewed us his air gun which fired 22 times at one charge. He shewed His pneumatic wonder astonished the Indians — but was it a single-shot or, as new evidence suggests, a repeater?

Whatever type it may have been, Philadelphia gunsmith Isaiah Lukens probably made the air gun that Meriwether Lewis took to the Pacific.
us the mode of charging her and then loaded with 12 balls which he intended to fire one at a time; but she by some means lost the whole charge of air at the first fire. He charged her again and then she fired twice. He then found the cause and in some measure prevented the airs escaping, and then she fired seven times; but when in perfect order she fires 22 times in a minute. All the balls are put at once into a short side barrel and are then dropped into the chamber of the gun one at a time by moving a spring; and when the trigger is pulled just so much air escapes out of the air bag which forms the breech of the gun as serves for one ball. It is a curious piece of workmanship not easily described and therefore I omit attempting it.1

Reading this passage left me stunned and momentarily speechless. For 25 years, most firearms historians have believed that Lewis carried a single-shot air rifle made by Lukens and now on display at V.M.I. As it happened, at that very moment I had in my hand a large laminated poster, purchased a few minutes earlier at the display booth of the Army Corps of Engineers, of “The Lewis & Clark Expedition Air Rifle.” The photograph on the poster was that of the single-shot Lukens on view at V.M.I. But that single-shot rifle and the repeating air gun described by Rodney are different in crucial respects.

I was familiar with the type of air gun described by Rodney. He wrote about a gun with a dozen or more balls pre-loaded into a tube-shaped magazine fixed alongside the barrel. Once the butt–reservoir was filled with air, it was only necessary for the shooter to push a small metal bar—the breechblock—about an inch to the right. This action removed another ball from the magazine and positioned it for firing. With this simple but ingenious mechanism Lewis truly could have fired all 22 balls mentioned by Rodney in less than a minute.

In modern parlance, this gun was a “repeater.” A repeating mechanism of that description had been well known in Europe since its introduction by the Vienna-based gunsmith Bartolomeo Girandoni in 1780.2

My questions to Ludd were, Who was Rodney, and is his account credible?

Rodney, I learned, fought in the Revolutionary War as a captain (later colonel) in the Delaware militia. He saw action at the Battle of Princeton, and as ranking officer in his regiment achieved the distinction of guarding Washington himself during the Continental Army’s march to winter quarters at Morristown. In 1781, he served as a delegate to the Confederation Congress and was later speaker of the Delaware house of representatives and a justice of the Delaware supreme court.3 In July 1803, President Jefferson appointed him a judge in the Mississippi Territory. The 59-year-old Rodney was en route to assume that post when he met Lewis in Wheeling.4

In his journal, Rodney writes of meeting Lewis on September 7 and witnessing the air-gun demonstration on September 8. Over dinner that evening, they talked about the air gun and the portable iron boat fabricated for Lewis at Harpers Ferry. For dessert they had watermelon, which they enjoyed again the next day when Rodney came aboard the keelboat for “a parting drink” with the young explorer. “I … then bid him adieu and stayed on shore to see him depart, and I waited till I saw him over the first ripple.”5

The Lukens single-shot air rifle

Few details are known of the air gun carried by Lewis, since he wrote nothing in the journals about its mechanism or operation, and Rodney’s words are the first we have of its specifics.

Any air gun needs a reservoir to hold the compressed air that propels the ball. As mentioned, the shooter fills the reservoir with a device similar to a bicycle pump. The number of strokes can vary from 500 to 2,000,
depending on the type of reservoir and the amount of pressure desired. Air guns of the period could be pumped up to 500 p.s.i. (pounds per square inch). By comparison, the air pressure in most auto tires is 30 to 40 p.s.i.

The air guns of Lewis’s day had three types of reservoirs. In many guns, including the Lukens model at V.M.I. and almost certainly the gun described by Rodney, the reservoir was a metal chamber that formed the buttstock. In other models it was an external hollow sphere, about the size of a grapefruit, that either hung from the bottom of the barrel or perched on the top. The reservoir could also take the form of a hollow outer shell that enveloped the barrel.

In 1956, pioneer air-gun collector G. Charter Harrison, Jr., suggested that Lewis had probably carried a single-shot Lukens air rifle with a butt reservoir. A year later, Harrison changed his mind and proposed that the Lewis air gun probably had a hanging spherical chamber fastened in front of the trigger guard. So matters stood until 1976, when air-gun collector Henry M. Stewart presented a paper at a meeting of the American Society of Arms Collectors arguing that Harrison was right the first time—the weapon carried by Lewis was probably a Lukens-style air rifle, with the reservoir in the buttstock. A key piece of evidence was an 1847 catalogue he had found in the archives of the Franklin Institute, of Philadelphia. This document listed the items offered in the sale of the estate of Isaiah Lukens, a prolific instrument maker, clocksmith, and all-around craftsman whose output included chronometers, nautical devices, and air canes (similar to air guns, these were walking canes with a firing mechanism concealed in the shaft). It was the catalogue’s item number 95 that got Stewart’s attention: “A large [air gun] made for, and used by Messrs Lewis & Clark in their exploring expeditions. A great curiosity.”

Stewart owned a number of air guns made by Lukens, and he was certain that one of them was probably the weapon carried on the expedition. He based this belief on certain repairs that appeared to have been made to the gun’s main spring which were similar to those made by John Shields, the expedition’s gunsmith, as recorded by Lewis on June 9, 1805. After his death, in 1988, Stewart’s large collection of firearms, including the air rifle thought to have been Lewis’s, went to Stewart’s alma mater, V.M.I.

**GIRANDONI-STYLE REPEATING AIR GUN**

In the late 18th century, Bartolomeo Girandoni designed and manufactured butt-reservoir, breech-loading, tube-fed repeating air rifles in his Vienna shop for the Austrian army. He received a contract for 500 air guns in 1780 and an additional 700 in 1785. Eventually some 1,500 Girandoni air rifles saw service in the Austrian army. An instruction manual printed in 1788 for Austrian troops fighting in the Russo-Turkish War gives the rifle’s
specifications (converted to our system of measurement): caliber (bore diameter), .51 inches; weight, loaded, 9 pounds, 5 ounces.; overall length, 48 1/2 inches; length of octagonal barrel, 33 inches. The forestock was walnut, and the butt-reservoir consisted of two forged sheet-iron halves joined by 11 rivets and brazed all around for a hermetic seal, then covered with leather.13

The rifle’s magazine, a tube fixed to the barrel, held 20 to 30 balls, depending on the particular model. A sliding breechblock intersected the magazine at a right angle. The breechblock had a hollowed-out chamber that held a single ball. Once a ball was chambered, a leafspring attached to the right side of the breechblock pushed it to the left, into the barrel, and held it in place for firing. Cocking the hammer and pulling the trigger opened and closed a valve, releasing a burst of air from the reservoir with sufficient force to propel the ball. To fire a second round, the shooter pushed the breechblock to the right with his thumb while tilting the rifle up, causing another ball to roll into the chamber. With the release of thumb pressure, the leafspring pushed the breechblock and chambered ball back into firing position.

Using a hand pump, a shooter filled the reservoir with air, loaded the magazine, and fired one ball at a time until the air in the reservoir was exhausted. The Girandoni air guns used by the Austrian army had sufficient pressure to fire 30 consecutive balls at least 125 yards at a lethal velocity.

What we know about the operating parts and procedures of Girandoni air guns closely matches Thomas Rodney’s account of Lewis’s gun: “All the balls are put in at once into a short side barrel and are then dropped into the chamber of the gun one at a time by moving a spring; and when the trigger is pulled just so much air escapes out of the air bag … as serves for one ball.”14

The case for a Girandoni-type air gun
Rodney’s account is credible. His description of his two days with Lewis meshes with Lewis’s account of his meeting with Rodney, who recorded the events immediately after they occurred. Moreover, Rodney knew guns: he was a veteran of the Revolutionary War, a militia colonel, and a hunter. His Ohio River journal includes several references to hunting, and as recently as the day before his meeting with Lewis he purchased shot and powder. So it is readily apparent that Rodney was familiar with the single-shot guns of the day.19 And the air gun he describes Lewis demonstrating is remarkably similar to Girandoni’s. It is most definitely not a single-shot, muzzle-loading air gun of the Lukens type.

Many private gunmakers in Europe made copies and variations of the so-called Girandoni system, and by Lewis’s day knowledge of the mechanism had almost certainly arrived in the United States. Air-gun historian Robert Beeman points out that the typical receiver (the metal housing containing the gun’s moving parts) on air guns made by Lukens and his protégé Jacob Kunz is similar in its materials (brass or bronze), shape, and style to those of the Girandoni-type Austrian butt-reservoir air rifles in his collection. “Such a styling,” writes Beeman, “had already made its way to England … by at least 1805, so it is reasonable that this style could have found its way to America by the end of the 1700s.”16 Beeman specifically refers to the receivers of the guns in question, but it follows that any part or all of the Girandoni system could be copied.17

Another clue to the possibility that Lewis carried a Girandoni-type air gun is the reaction of Indians who saw him shoot it. Time and again, Lewis and Clark report how a demonstration of the air gun invariably “astonished” the natives. I have often wondered why the Indians would
be so astonished. It’s true that firing the single-shot Lukens air rifle required no gunpowder and produced no smoke, and the sound would not have been as loud as the familiar musket’s. Otherwise, the Lukens was loaded, rammed, and cocked in a manner familiar to the Indians. But a rapid-fire, repeating, smokeless gun would indeed have astonished them—and almost anyone else at the time.18

Assuming that Lewis had a tube-fed, breech-loading, repeating air gun makes one more alert to nuances in the wording of the journals. For me, the strongest evidence in the journals of a repeating gun is in Lewis’s entry of January 24, 1806: “My Air-gun also astonishes them very much, they cannot comprehend it’s shooting so often and without powder; and think that it is great medicine.”19 The key words are “shooting so often.”

On August 30, 1804, Clark wrote, “the air gun astonished them verry much.”20 But the scene appears to have impressed Private Joseph Whitehouse even more. On the same day, Whitehouse recorded, “They all stood amazed at this curiosity; Captain Lewis discharged the Air Gun several times, and the Indians ran hastily to see the holes that the Balls had made which was discharged from it. [A]t finding the Balls had entered the Tree, they shouted a loud at the sight and the Execution that was done surprized them exceedingly.”21

Hitting a tree a couple of times is no big deal, but Whitehouse’s description makes more sense if you imagine Lewis rapidly firing six to eight shots just by pushing the chamber bar to the right as fast as he could while simultaneously cocking the hammer and pulling the trigger—all of which he could easily do with a Girandoni-style weapon. It must have been the speed of the shooting that impressed the observers. Rodney wrote that Lewis told him he could fire 22 shots in a minute. Now that would truly “astonish” the Indians! By contrast, with the single-shot Lukens he would have had to dismount the gun, place a ball in the muzzle, ram it down with the ramrod, raise and cock the gun, and fire. It’s doubtful that a skilled shooter could have gotten off more than 10 shots in a minute this way, and even six shots would have been very fast.

Almost exactly one year before—on August 31, 1803—Lewis, having departed from Pittsburgh earlier in the day, demonstrated his air gun to a group of settlers about three miles down the Ohio. When a man in the crowd named Blaze Cenas tried handling the gun, it accidentally discharged. The ball struck a woman in the head and knocked her to the ground. As blood gushed from her temple Lewis feared the shot was fatal, but the ball had merely grazed her scalp, and “in a minute she revived to our enespressable satisfaction.”22

This accidental shooting becomes more understandable when one assumes that the weapon was a repeater. Lewis notes that Cenas was “unacquainted with the management of the gun.” Cenas, and for that matter any other man living on the Ohio in 1803, would have been on familiar terms with the single-shot flintlocks of the day, and the operation of a Lukens-type single-shot air gun would have seemed vaguely similar in the sense that a ball had to be rammed down the muzzle each time the gun was fired.

In the same paragraph, Lewis reports that he fired the gun seven times at 55 yards with pretty good success. That could be interpreted as seven rapid shots.

The journals provide another intriguing clue about a detail of Lewis’s pneumatic wonder. All the expedition journalists refer to it as a “gun,” never as a “rifle.” All rifles are guns but not all guns are rifles, as any Marine will tell you, and it’s an important distinction. In this article I use “air rifle” when writing of the Lukens firearm on display at V.M.I. That weapon has a rifled bore, and
is, therefore, a rifle. Because I do not know if the repeating gun that Rodney describes was rifled or smoothbore, I refer to it by the less specific term air gun. The Corps of Discovery carried both rifles and smoothbores, and we can be certain that every man on the expedition knew the difference. There are 39 references in the journals to “air gun” and not a single one to “air rifle.” So whatever its particular type, Lewis’s weapon was probably a smoothbore.

If Lewis did have a Girandoni-type air gun, how did he acquire it? I believe that the gun, in fact, came from the shop of Isaiah Lukens. The catalogue of the Lukens estate specifically states that the air gun was “made for” Lewis. Lukens could well have had a Girandoni-system European air gun in stock, but I think it more likely that he made one on the Girandoni principle. Lukens, like Girandoni, was a clockmaker, and the scope of Lukens’s work strongly suggests that he had the skills, knowledge, and tools for making such a gun, whose fabrication would not be nearly so difficult as making the scientific instruments listed in the estate sale. Lukens may have read about the mechanism and seen diagrams of the Girandoni rifle in scientific or military journals of the day, or some traveler may have shown him an example. Although Girandoni made air rifles under contract with the Austrian army, many stolen or captured weapons probably wound up in private hands. The Austrian army fought the French from 1792 to 1797. A government report of September 21, 1799, lists 308 air rifles as missing, and another report, dated January 20, 1801, states that 399 Girandoni air rifles had been lost in battle.

The gun listed in Lukens’s estate is different from all the other air guns listed. In addition to saying it was the gun Lewis and Clark carried on the expedition, the catalogue calls it a “great curiosity.” (The italics are in the original.) The other air guns and air canes in the catalogue must have been curiosities in that era, too, and to single out this weapon in such a manner suggests that it was something far out of the ordinary.

In summary, Thomas Rodney’s contemporaneous description of Meriwether Lewis’s air gun seems to me to be beyond doubt. I believe that he accurately described the mechanism that he had seen. Rodney’s journal is filled with detailed observations written by a man with a keen interest in almost everything he encountered, be it a floating mill, a fossil bed, or Lewis’s keelboat.

We may wonder why Lewis never mentions that his air gun was a repeater. Nor did Lewis say whether his air gun had a butt-reservoir or a sphere reservoir, or how many times it needed to be pumped, or its caliber, or whether its bore was rifled or smooth. But the journals are often brief or silent on details concerning common items and routines. So it’s frustrating but not surprising that Lewis and the other expedition journalists neglected to tell us about the technical details of their firearms. The

“Capt Lewis fired his Air gun”... excerpts from the L&C journals

we Showed them many Curiosities and the air gun which they were much astonisht at.
—Clark, August 19, 1804 (among the Otos)

Capt. Lewis Shot his air gun told them that their was medicin in her & that She would doe Great execution, they were all amazed at the curiosity, & as Soon as he had Shot a few times they all ran hastily to See the Ball holes in the tree they Shouted aloud at the Site of the execution She would doe &c.
—Private Joseph Whitehouse, August 30, 1804 (among the Teton Sioux)

after the Council was over we Shot the Air gun which appeared to assonish the nativs much.
Clark, October 29, 1804 (among the Hidatsas)

Capt. Lewis Shot the airgun, which they thought a great medicine & Shewed them a number of Strange things.
—Sergeant John Ordway, August 17, 1805 (among the Shoshones)

Several Canoes of men omen and Children came to the camp. and at one time there was about 37 of those people in Camp Capt Lewis fired his Air gun which astonished them in Such a manner that they were orderly and kept at a proper distance during the time they Continued with him.
—Clark, April 3, 1806 (on the lower Columbia)

after the Council was over ... we amused ourselves with Shewing them the power of Magnetism, the Spye glass, compass, watch, air gun and Sundery other articles equally novel and incomprehensible to them.
—Clark, May 11, 1806 (among the Nez Perces)

I now got back to the perogae as well as I could and prepared my self with a pistol my rifle and air-gun being determined as a retreat was impracticable to sell my life as dearly as possible.
—Lewis, August 11, 1806 (after his accidental shooting by Pierre Cruzatte; Lewis thought at first that they were under attack)
most information we have about the air gun comes from a single interested observer—Thomas Rodney.

While entry number 95 of the 1847 Lukens catalogue is of immense interest and points to the probability that Lukens provided Lewis with an air gun, it is not hard evidence that the particular air gun on display at V.M.I. is, in fact, the one taken on the journey. In the face of Rodney’s eyewitness description, the question of where Lewis’s air gun is today, or whether it still exists, remains open.

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NOTES

1 Dwight L. Smith and Ray Swick, eds., *A Journey through the West—Thomas Rodney’s 1803 Journal from Delaware to the Mississippi Territory* (Athens: Ohio University Press, 1997), p. 50. Rodney met up again with Lewis at Louisville the evening of October 17, when “Captain Lewis and his companion Captain Clark … called at our boat to see us and took a glass of wine with us and bid us adieu.” Ibid., p. 124.

2 Girandoni (also spelled Girardoni and Girardony) was not the first to make repeating air guns, but he was the first to make them by the hundreds. Repeating air guns were known in England by the 1730s. In addition to fulfilling his military contracts, Girandoni also made guns for the civilian market.

3 He was also the younger brother of Caesar Rodney, a hero of the Revolutionary War as well as a member of the Continental Congress and signer of the Declaration of Independence.

4 Smith and Swick, pp. 5-8.

5 Ibid., pp. 50-53. Rodney also mentions the dimensions of the gland by the 1730s. In addition to fulfilling his military contracts, Girandoni also made guns for the civilian market.


8 G. Charter Harrison, Jr., “Re-Inquiry Into the Lewis and Clark Air Gun,” *The Gun Report*, November 1957, p. 14. Harrison had found an American-made, ball-reservoir air gun with repairs to it which he thought were consistent with those made by the expedition’s gunsmith, John Shields. The ball-reservoir air gun he found is pictured on p. 17.


10 Moulton, Vol. 4, p. 271. Lewis: “it was necessary to repare some of our arms, and particularly my Airgun the main spring of which was broken.”

11 For more on Stewart’s air gun and other existing contenders for the one that Lewis may have taken on the expedition, see Robert Beeman and Ulrich Eicstädt, “Whence the Wind Blows,” www.beemans.net/visier-lewis&clarkairgun.htm.


13 Ibid., p. 250.

14 Smith and Swick, p. 50.

15 Ibid., pp. 39, 50, 81, 89, 99, 109, 118, and 120. Rodney wrote of hunting, cleaning his gun, making balls, etc., in many entries.


17 Eldon G. Wolff, *Air Guns* (Milwaukee Public Museum, 1958), pp. 97-98. Using an alternate spelling of Girandoni’s name, Wolff states, “The Girardonii breech is found not only on air guns bearing that name, but also on a number of others, the following have been examined: Fruwirth, Oesterleins, Staudenmayer, Contriner, and Lowentz.” It may be significant that Rodney refers to the butt reservoir of Lewis’s gun as “the air bag which forms the britch.” I believe that “britch” refers to the gun’s breech (the lower end of the barrel in which the ball is positioned for firing) and that “bag” refers to the butt reservoir. Note in the illustration of the Girardonii gun that the butt-reservoir is cone-shaped with a convex end. The word “bag” may describe this shape. Later in the 19th century, there were powder flasks cased with London Colt revolvers that had a similar shape, and they are called “bag flasks.” Bulbous grips on small flintlock pistols of the period are referred to as “bag-shape grips.” It isn’t clear whether Rodney is describing the shape of the air reservoir or is using “bag” as a synonym for the “container” of air.

18 Several previous studies of Lewis’s air gun state that the gun is mentioned 16 to 19 times in the journals. (See, for example, Roy M. Chatters, “The Not-So-Enigmatic Lewis and Clark Airgun,” *We Proceeded On*, May 1977, editor’s note p. 6; and Ashley Halsey, Jr., “The Air Gun of the Lewis & Clark Expedition,” *American Rifleman*, August 1984, p. 37.) Earlier researchers, however, did not have the benefit of the most recent (Moulton) edition of Lewis and Clark journals, whose 13 volumes include virtually all known copies, rough copies, field notes, and even scraps of paper associated with the original writings. Moulton lists 39 references to the air gun. Some are obviously one writer copying from the other, or one writer later refining his notes. But little bits of evidence can sometimes be gleaned from these slight variations.

19 Moulton, Vol. 6, p. 233.


21 Ibid., Vol. 11, p. 66.


23 This claim apparently was written 44 years after the fact—something to bear in mind. How or why Lukens reacquired the weapon is unknown—perhaps Lewis returned it for maintenance and never reclaimed it.

24 Baer, p. 256. It is not clear whether 308 plus 399 guns were lost, or whether the 308 are included in the figure 399.

25 Smith and Swick, pp. 76, 80, and 50.

26 The author thanks Ludd Trozpek and Jay Rasmussen for their invaluable assistance with this article.
The L&C journals are silent on whether the explorers hewed to military regulations about grooming, leaving artists to make their own judgments. In this detail from John Clymer’s *Up the Jefferson*, Clark wears his red hair long and tied in a queue. Both he and York (rear) are clean shaven, while Charbonneau (in front of Sacagawea) and the other man are bearded.
Neatness Mat ered

Hair, beards, and the Corps of Discovery

by Robert J. Moore, Jr.

When the Corps of Discovery worked its way across the continent two centuries ago, were its members bearded or clean shaven, and did they wear their hair long or short? Paintings of the expedition portray the explorers in various degrees of hirsuteness. Such details, however, are left largely to the artist’s imagination, for like so many matters of daily routine, the journals are silent on the explorers’ grooming habits.

Despite the lack of documentary evidence, I believe that almost all of the time—even in the deepest part of the American wilderness—Lewis and Clark and the men they led shaved on a regular basis and kept their hair closely cropped, in accordance with U.S. Army regulations and civilian styles of the period.

Most of the men recruited for the Corps of Discovery were volunteers from other army units, and nearly all of the other men who joined from Kentucky, Indiana, Illinois, and Missouri enlisted for the duration of the expedition. All members, even civilian interpreters, were subject to military law and discipline. In addition, they were men of their era, influenced by civilian fashions, which by 1804 favored short hair and clean-shaven faces, perhaps adorned with the close-cropped sideburns that were then coming into vogue.

In or out of the army, beards were not fashionable during this period. Think of paintings of the Founding Fathers, or any other portrait or statue of a man of the 1750-1800 period, and you will be hard-pressed to find a single depiction of an individual sporting a beard, a moustache, or any facial hair whatsoever. Shortly after 1800, long sideburns (a term not invented until the mid-19th century) began to become fashionable. Their length increased gradually, until by the War of 1812 many extended to the chin and almost formed a full beard. Hair was worn full but not long in the back as it had been in the 1700s. The ideal hairstyle, which was emulated by the fashionable young men of the day, was that sported by the ancient Romans on countless pieces of statuary, with short cascading bangs in the front. Napoleon Bonaparte—probably the most famous person of the era—sported this haircut, called “à la Titus,” after the Roman Emperor Titus Flavius Sabinus Vespasianus, who ruled from 79 to 81 A.D.

However much influenced by popular fashion, the grooming of expedition members was dictated more by military regulation. Clues abound in the journals as to the military nature of the expedition and the way in which normal military procedures continued, even in the middle of the wilderness. The journals mention soldiers standing formal guard duty in the many camps along the route and in the three forts constructed for winter quarters. Frequent, formal inspections were conducted of the men and their clothing, arms, and accoutrements. Courts martial were convened to discipline men who violated the Ar-
articles of War, and harsh punishments were meted out to the guilty. Lewis and Clark used their espontoons—spear-like signs of military rank—in the middle of what is now Montana, and Lewis wore his officer’s cocked hat at the crest of the Rocky Mountains. At imposing ceremonies held at various points on their trek across the continent, officers and soldiers dressed in formal uniforms to awe and impress native peoples.

Uniformity of appearance was extremely important to 18th- and early 19th-century warfare, and this extended to hair length and whether or not men could wear beards. The well-trained soldier was part of a unit that looked smart, marched properly, and fired volleys so much in unison that the shots sounded as though they came from a single weapon. Uniformity had the potential to scare the enemy; in effect it was a form of psychological warfare. The armies of the 18th and early 19th century conformed to rigid ideals of individual appearance. Some units had height requirements. Many German and Prussian units standardized their appearance by requiring men to braid their hair into long queues, or pigtails, that fell to the waist, powder their hair white, and grow thick moustaches, which they waxed to keep the points up. (In lieu of braiding, some wore hair pieces, and men deficient in facial hair solved the problem with false moustaches and glue.)

In the United States Army, from the time of its inception, most men had long hair tied back in a queue that fell to the shoulders, and no facial hair was allowed. This followed the British pattern of the era. During the Revolutionary War, soldiers in the Continental Army were required to shave three times a week. Regimental barbers shaved the men in the evening hours and were paid a small amount by each man for the service. This custom continued into the era of Lewis and Clark.

Wilkinson’s Order

Traditions were well established in the U.S. Army and strongly entrenched by the time of the Lewis and Clark Expedition. For this reason, many officers were upset by an order in 1801 from James Wilkinson, the army’s commanding general, that required them to cut their hair short. The order, probably influenced by the latest republican fashions of Napoleonic France, was issued on April 30, 1801, and read in part: “For the accommodation, comfort and health of the troops the hair is to be cropped without exception, and the General will give the Example.” Many officers and men were at first resistant to the order, which was repeated several times over the next few months. Wilkinson also forbade the long sideburns of the era. An order of July 29, 1801, stated: “Whiskers and Short Hair illy accord. They will not therefore be permitted to extend lower than the bottom of the ear. The less hair about a Soldier’s head, the neater and cleaner will he be.” Wilkinson would brook no resistance to his fiat and repeated it in general orders issued October 11, 1801:

The Order for Cropping the Hair was intended to introduce uniformity as well as neatness and cleanliness. The General observes that the first principle has been misunderstood, or Disregarded. He therefore deems it necessary to direct the Hair to be Close Cropped—and with as much uniformity as possible, and he orders the Inspecting Officers to report all such persons as do not conform to this essential regulation.

The order may actually have been prompted by President Jefferson, but it was Wilkinson who zealously enforced it. Many officers resisted the order. Some associated cropped hair with criminals, while others simply clung to the older style and traditions within the service. Some officers did not cut their hair until Wilkinson made a personal inspection of their cantonments. Captain Russell Bissell, the commanding officer of one of the companies from which men were drawn for the Lewis and Clark Expedition, wrote to his brother Daniel on July 9, 1802, that he was ready to resign from the army over the issue, but since no one at his post was empowered to accept his resignation, “I was obliged to submit to the act that I despised, and if ever you see me you will find that I have been closely cropped.”

One old veteran of the Revolution, Colonel Richard Butler of the 2nd U.S. Infantry, appealed personally to Wilkinson to be exempted from the order. Wilkinson made a special exception in the case of Butler in his general order of July 29, 1801, allowing this one officer to con-
tinue to wear his hair long. But trouble loomed, for Wilkinson loved uniformity and insisted that everyone, from a private to the highest-ranking officer, be subject to criticism for improper dress or deportment. He wrote in general orders on December 19, 1801, that “where such loose doctrines [are] suffered to prevail, discipline would languish and indolence, ignorance obstinacy and anarchy would soon triumph.”

**Butler’s Defiance**

Wilkinson believed that the first duty of an officer was to lead by example. Perhaps for this reason, in June 1803 he revoked his exception to Colonel Butler’s queue. He also placed the old officer under arrest and ordered him to Fredericktown, Maryland, for court martial. Andrew Jackson, then an officer in the Tennessee militia, wrote to President Jefferson protesting Wilkinson’s hounding of Butler. Many officers believed this contretemps was merely an excuse to force the old man out of the service. Butler received a reprimand, but in 1805 he was court martialed once more, this time in New Orleans. The court found Butler guilty of acting mutinously by refusing the order of the commanding general to crop his hair and appearing publicly in command of his troops with his hair queued. He was suspended from command for a year without pay. But the sentence was never carried out, for on September 7, 1805, just days after the conclusion of the court martial, Butler caught yellow fever and died. Before expiring, he asked friends to bore a hole in the bottom of his coffin so that his queue might hang down in final defiance of Wilkinson’s order.

For the young and ambitious in the army, resistance of this type would never do, and by the time Lewis and Clark assembled their men at Wood River, Illinois, in the fall of 1803, soldiers and officers (other than Richard Butler) had short hair. In 1801 and 1802, Colonel John Hamtramck, commanding officer of the 1st U.S. Infantry, ordered that “hair was worn short by the time of the expedition. 10

Colonel Hamtramck and others also repeated the necessity of strict uniformity. Camp and garrison life was regulated by Baron Freidrich Wilhelm von Steuben’s *Regulations for the Order and Discipline of the Troops of the United States*, first promulgated in 1778, republished in 1794, and known as the Blue Book. Specific instructions for captains included the injunction that a company commander “must be very particular in the daily and weekly inspections of his men, causing all deficiencies to be immediately supplied; and when he discovers any irregularity in the dress or conduct of any soldier, he must not only punish him, but the non-commissioned officer to whose squad he belongs.”

One can easily assume that such rules and regulations were relaxed at frontier outposts and garrisons, but evidence in general orders of the period tends to refute this. Fort Wayne, Indiana, which in 1808 was still a frontier outpost, was subject to this reminder from its commanding officer on October 23 of that year:

An Officer on duty should never go out of his quarters, without being dressed in full uniform, not forgetting his side arms. It may be thought by some that this is unnecessary at a post so remotely situated as this; but it is evident that a contrary practice will lead the young and inexperienced officers into an erroneous, and negligent mode of doing duty; which will not only be a disgrace to them, but to their superior officers under whose immediate charge they have been placed.

**Army Regs and the Corps of Discovery**

Uniformity, no matter where, when, or under what circumstances, was integral to the operation of all military forces and the training of all young officers, including Meriwether Lewis and William Clark. So what can be said regarding how the men of the Corps of Discovery may have worn their hair and cut their whiskers during the expedition?

Lewis believed fervently in the rules and regulations of the U.S. Army. It is almost certain that Lewis would have enforced all of these rules on the upstream voyage of 1804, from Camp River Dubois to Fort Mandan. During this leg of the trip, courts martial were frequent, and no act of disobedience or negligence of duty went unnoticed or unpunished. Lewis was forging a team that could successfully complete its daunting mission. He needed to test each man’s ability to follow orders without question and conform to military rules and protocol. The strict regimen winnowed out trouble makers like John Newman and Moses Reed, and by the time the expedition left Fort Mandan for *terra incognita*, Lewis had a team he could trust.

Given this emphasis on military discipline, it seems certain that as long as there were razors and soap and sufficient time to apply them, the Corps of Discovery maintained a clean-shaven appearance. There is no indication
that they ever ran out of razors or soap. Time proved the crucial factor.

Did the men continue to crop their hair and shave their beards as they proceeded beyond Fort Mandan? Again, I believe that they did, where possible. The men may have looked a little scruffy (and Lewis may have relaxed discipline a bit) as they traveled through some of the more demanding portions of their route, but each time they completed one of these sections they arrived at a camp where they stayed long enough to rest, repair clothing, make moccasins, and stock up on food. So, although the men may have gone longer than three days between shaves, or even a month between haircuts, they had ample time to bring their appearance back into conformity with military regulations at the Marias River Camp, the Upper and Lower Portage Camps at Great Falls, the Shoshone village near Tendoy, Idaho, and in the Nez Perce villages after crossing the Bitterroot Mountains.

There are virtually no references in the journals to beards or hair or whether they were allowed to grow or were cut. Admittedly, this makes most of this essay conjectural, for it is based on known military protocol, the character of Meriwether Lewis as historians understand it, and the circumstantial evidence—or nonevidence—contained in the journals. It seems likely that if the hair or beards of the men were being worn in an uncharacteristic fashion, this fact would have been mentioned, particularly by military men like Lewis, Ordway, Gass, and Whitehouse.

The only journal references to the hair length of expedition members concern Lewis, Clark, and York, and all were made within a few days of one another, in late summer of 1805.

The first reference is to the events of August 16, after Lewis, leading a small advance party, made contact with the Shoshones and convinced their chief, Cameahwait, and some of his warriors to accompany him in his attempt to rendezvous with Clark and the main party. The Shoshones were suspicious, fearing the whites might lead them into an ambush by their enemies the Atsina, and exchanged some items of clothing with Lewis and his men in an attempt to disguise them as Indians. Cameahwait gave Lewis a tippet of ermine tails, and Lewis reciprocated by placing his cocked hat on the chief’s head. The other men followed Lewis’s example, so that all of them were “completely metamorphised” into Indians. Noting how he must have looked, Lewis remarks that “my over shirt being of the Indian form my hair dishivled and skin well browned with the sun I wanted no further addition to make me a complete Indian in appearance.”

To be “dishivled” enough to be seen at a distance, Lewis’s hair must have been shaggy—if not downright long—by military standards. The fact that he makes a point of mentioning that his hair is disheveled suggests this was not its usual state. Note, too, that the exchange of clothing was all it took to make the whites “Indian in appearance.” The whites must have been clean shaven and the Indians must have had short hair for the two groups to blend so well. Most Indian men plucked their whiskers, and Lewis states that the Shoshones’ hair was cut short as a sign of mourning.

Later in the same entry, Lewis relates that “some of the party had also told the Indians that we had a man with us who was black and had short curling hair.” This description of York indicates that his hair was being kept short, even during this extended march over difficult terrain.

On the following day (August 17), Clark’s party was reunited with Lewis’s. Clark’s journal entry describing his meeting with Cameahwait suggests that his hair was also longer than warranted by military regulations: “the Main Chief immediately tied to my hair Six Small pieces of Shells resembling pearl, which is highly valued by those people and are procured from the nations residing near the Sea Coast.” Unless Clark’s hair was at least a few inches long, it would have been difficult if not impossible to tie pieces of shells into it.

Several weeks later, after the explorers had crossed Lost Trail Pass and were camped with Salish Indians on the upper Bitterroot River, Private Joseph Whitehouse described a conversation with their hosts conducted through sign language: “they tell us that we can go in 6 days to where white traders come and that they had seen bearded men who came [to] a river to the North of us 6 days.
march.”18 This passage, with its reference to “bearded men,” indicates that conspicuous facial hair—whether full beards or scruffy “five o’clock shadows”—was an identifying feature of white men generally. Although it doesn’t address the question of beards on Lewis and Clark’s men, the oral history of the Nez Percé—the next tribe they encountered, after the brutal eight-day crossing of the Bitterroot Mountains—suggests they were unshaven when the expedition arrived at the Nez Percé’s encampment at Weippe Prairie. That history refers to them not as men but as “creatures” with light skin and hair on their faces.19 At this point the explorers were near starvation and physically at their lowest ebb, and given the circumstances it is probable that most of them hadn’t shaved for a week or longer. As they slowly regained their health among the hospitable Nez Percés, it is likely that they resumed shaving and perhaps trimmed their hair before their descent of the Clearwater, Snake, and Columbia rivers.

During their miserable, wind-and-rain lashed month in the Columbia estuary, the explorers may also have let their appearance go once more. But in December 1805, after completing the construction of Fort Clatsop, Lewis issued an order that re-established military discipline. The order, which spelled out the duties of the guards, relations with the local Indians, security within the fort, and disposition of the expedition’s tools, has an air of military authority and crispness missing since the Fort Mandan winter.20 This order put the Corps of Discovery back on a firm military footing, and although unstated, virtually assured the shaving of beards and the cropping of hair to regulation length. It is certain that the captains themselves would have conformed to the order to set an example for their men. Only Charbonneau and Drouillard, as civilian interpreters, and York, who of course was not in the army and whose hair, as we have seen, was kept short anyway, would have been exempted.

Journal entries during the return trek make no mention of hair length. While homeward bound the expedition suffered none of the severe hardships of the sort experienced in 1805, and it seems unlikely that the captains would have relaxed military dictates about hair and beards, particularly within Clark’s detachment on the Yellowstone. The descent of the Missouri River from the Mandan villages to St. Louis during the late summer of 1806 was swift and took up longer portions of the day as the men strained at their paddles to return to civilization. During these weeks they once again may have acquired a scruffy look, but it seems certain that once they were back in the settled regions of Missouri their commanders would have insisted on proper grooming.

Pictorial references to the hair length of the captains are available for the period immediately following the expedition. These are the Peale portraits of Lewis and Clark, executed in 1807 and 1808, respectively. In these companion portraits, the most famous made of the two men, both explorers are shown with short hair. Two Saint-Mémin portraits of Lewis that were probably executed before the expedition show him with a queue [see p. 23], as do portraits of Clark painted after the expedition by Gilbert Stuart, Chester Harding, and George Catlin—Catlin’s made as late as 1832.21 The Stuart portrait, completed in 1810, just two years after the Peale portrait, shows Clark with a traditional 18th-century hairstyle—long, full, and with a queue—whereas the 1808 Peale portrait shows him with a shorter style, similar to what he must have worn on the expedition. The portraits make it clear that Clark preferred his hair cut long, and that he eventually reverted to this style after his return to civilian life.

Evidence in the journals is paltry regarding hair length and beards, but what we know about military protocol, Meriwether Lewis’s enforcement of regulations, and the pride of the U.S. Army, which at the time emphasized personal appearance and uniformity at least as strictly as it does today, supports the view that short hair and clean-shaven faces were the norm for the greater part of the trek.

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Notes

1 The following original documents in the collections of the National Archives and Records Administration (NARA) include general orders for the U.S. Army at the time of Lewis and Clark...

2 See the General Orders of November 9, 1777, which enjoin the adjutants and brigade majors to let no man appear on the parade ground “whose appearance is not as decent as his circumstances will permit; having his beard shaved, hair combed, face washed and cloths put on in the best manner in his power.” This order is reprinted in John C. Fitzpatrick, ed., The Writings of George Washington from the Original Manuscript Sources, 1745-1799 (Washington, D.C.: U.S. Government Printing Office, 1931-1944), Vol. 15, p. 31. See also Hawkins’s Orderly Book, No. 1, Hazen’s Regiment, Hand’s Brigade, March 1, 1780, original in the Historical Society of Pennsylvania, which specifies that the men are to appear “with faces and hands washed, their Beards close shaved, their hair combed and tied if long enough.”

3 Record Group 98, NARA), No. 2, Vol. 162, Orderly Book of the Adjutant at Fort Adams, 3rd Inf. 1801-1802; and Orderly Book, Capt. Richard Sparks, 2nd Inf. 1802-1803.

4 Ibid. See also Standing Orders, 1803, Record Group 98, NARA, No. 10, Records of the Garrison at Fort Independence, Boston Harbor, 1803-1815, p. 68.

5 Ibid.


7 Standing Orders, 1803, Record Group 98, NARA, No. 10, Records of the Garrison at Fort Independence, Boston Harbor, 1803-1815 p. 64.


9 Ibid.


12 Von Steuben, pp. 135-136.


15 Ibid., pp. 121-122. Lewis states that Cameahwait’s hair was “cut close all over his head.”

16 Ibid., p. 106.

17 Ibid., p. 114.

18 Moulton., Vol. 11, p. 299.

19 This reference is based on personal conversations with Otis Hallmoon of the Nez Perce tribe.

20 Moulton., Vol. 6, pp. 156-158 (Lewis, January 1, 1806).

21 Large points out that the Saint-Mémin portraits are not dated but argues persuasively that they were executed in 1802 and 1803. This would have been after Wilkinson’s ban on long hair, but Captain Lewis would have been exempt from the order while serving on detached duty as Jefferson’s secretary.
On August 12, 1805, Meriwether Lewis and three other members of the Corps of Discovery were approaching the Continental Divide at Lemhi Pass in present-day southwestern Montana. They were following an Indian trail that paralleled what Lewis called a “little rivulet,” known today as Trail Creek. Soon the rivulet became so small that a man could easily straddle it. Private Hugh McNeal did just that and, undoubtedly thinking of the weeks upon weeks of hard poling, rowing, and cordelling behind him, “thanked his god that he had lived to bestride the mighty & heretofore deemed endless Missouri.” Two miles farther on they came to the tiny spring that was the rivulet’s source—and as far as Lewis could determine, “the most distant fountain of the waters of the mighty Missouri in such of which we have spent so many toilsome days and wristless nights.”

Lewis’s mission included finding answers to geographical questions posed by his patron, Thomas Jefferson. Did the Missouri offer a practical route to the Pacific? If so, could this route be completed by a short portage between the headwaters of the Missouri and those of the Columbia? And was the Missouri’s source a spring, a swamp, a pond, or possibly the “inland sea” that cartographers had placed, with acrobatic abandon, astride the spine of the continent?

Lewis and his companions appeared to have the answer to the last question immediately at hand. It must have been deeply satisfying to drink from this silvery trickle that gave birth to the rolling, roiling giant against whose currents they had labored since leaving civilization 15 months before. But Lewis was wrong in his assumption that this lovely little spring was the source of the Missouri, which he had missed by one hundred miles.
The question of the true source of the Missouri lies at the junction of history, geography, and human curiosity. Even if the matter were purely academic, it would still occupy a prominent place in our thoughts—people like to tie things together in neat packages and clear up seemingly unimportant geographical questions, whether they concern the source of rivers, the depth of oceans, or the heights of mountain peaks. The question of the Missouri’s source, however, is a bit more than academic, for history might have been very different had Lewis and Clark actually found it. For one thing, they might have missed their rendezvous with the Shoshone Indians, whose horses were crucial to crossing the Bitterroot Mountains.

On the surface it is a question one can easily finesse, just as Lewis did on July 28, 1805, at the Three Forks of the Missouri. In his journal that day he wrote, “Both Capt. C. and myself corrisponded in opinon with rispect to the impropriety of calling either of these [three] streams the Missouri and accordingly agreed to name them after the President of the United States and the Secretaries of the Treasury and state.” In other words, the Missouri by default starts where its three confluents—the Jefferson, the Gallatin, and the Madison—end, at today’s Headwaters State Park, near the town of Three Forks, Montana.

Any modern map purchased at a bookstore or service station confirms that the Missouri indeed “begins” at the Three Forks, just as Lewis stated and as cartographers ever since have decreed. But the “source” of a river as more strictly defined by geographers involves the notion of a river system, or watershed (the area drained by the main stream and its many tributaries). In this context, the length of a river is the farthest distance a molecule of water must travel to reach the river’s mouth, and the source of the river is where that molecule begins its journey.

A glance at a map of Montana easily reveals—without the aid of any statistical tables—that the Jefferson is the longest of the Missouri’s three forks, as well as the one farthest west. A map also shows that, in the cartographer’s sense, the Jefferson itself starts where the Big Hole and Beaverhead rivers come together, at present-day Twin Bridges, Montana. After ascending the Jefferson, the Corps of Discovery followed the Beaverhead south to its starting point on the map, the junction of Horse Prairie Creek and Red Rock River. In August 1805, Lewis and his companions, who were well ahead of the main party, turned up Horse Prairie Creek, which flows in from the west, and followed it to Trail Creek and Lemhi Pass. Had they continued up Red Rock River—the Beaverhead’s principal fork—and followed that tributary to its uppermost point, they would have passed through the Centennial Valley and eventually arrived at a spring issuing from a high mountain slope.

Located 21 miles west-southwest of West Yellowstone, Montana, that spring is the true cradle of the Missouri, a fact that was not firmly established until nearly a century after Lewis and Clark passed through Montana. It was Jacob V. Brower, an amateur explorer and archaeologist from Minnesota, who set the record straight in 1896 with the publication of his book *The Missouri and Its Utmost Source.*

The senior author of this article (Nell) learned of Brower’s book some years ago when Bill Sherman, a former president of the Lewis and Clark Trail Heritage Foundation who lives in Portland, Oregon, sent him a copy of the second (1897) edition, which he had purchased at a gun show for five dollars.

Brower’s narrative relates his efforts, during the summer of 1895, to pinpoint the Missouri’s source in the Cen-
tennial Valley. With his host, local rancher William N. Culver, he ascended Red Rock River through Hell Roaring Canyon and up into a subalpine valley. Beyond a small lake, he wrote, “we suddenly came in full view of a hole in the summit of the Rocky Mountains” from which issued a “little rivulet, two feet wide and scarcely two inches in depth, drawing its utmost supply from the inner walls of the mighty and towering uplifts surrounding it.”6 As a record of their visit, Brower left a copper plate inscribed with the date of discovery, August 29, 1895.

Having spent many of his boyhood summers close to the Centennial Valley, Bill Sherman was excited by Brower’s book and the details it provided. So were others with whom he shared this information. It appeared that the spring discovered by Brower—“this unique, most distant, and peculiar source of the Missouri”7—could be reached on foot. Perhaps, too, the copper plate placed there by Brower could still be found.

John Montague, another former Foundation president who lives in Portland, after learning about Brower’s explorations visited the Centennial Valley in 1988 or 1989 (neither he nor I can recall the exact year), and with his fellow Delta Air Lines pilot G.L. Perry hiked up to the spring. To their surprise they found a mound of rocks, and under this cairn a glass jar placed there by two other adventurers several years before. (The jar held a piece of paper declaring their intention to canoe the entire length of the greater Missouri-Mississippi system, from near this spot all the way to New Orleans, a feat they apparently accomplished.) To commemorate their own visit, John placed his Foundation business card in the jar. He put the jar back in place and rebuilt the cairn over it.

John related these events to the senior author, who naturally bristled with impatience to make the trip himself. It took him a year or so to do it, but he eventually organized his own little Corps of Rediscovery and, with 15 other brave souls from the Foundation’s recently formed Headwaters Chapter (based in Bozeman, Montana), made his pilgrimage in the following summer.

The area we set out to explore lies within the jurisdiction of two Ranger districts of the U.S. Forest Service. The rangers we spoke to were unfamiliar with Brower’s book or its significance and expressed concern about our climbing in rugged terrain noted for sudden weather changes. The Centennial Mountains, which border the valley on its south side, are unique in Montana: they run east-west rather than north-south, an alignment that encourages the incubation of severe storms producing rain, lightning, hail, and snow any month of the year.

**Day of Discovery**

We left our base in Lima, Montana, at the western end of the Centennial Valley, on the morning of July 10, 1990. Our caravan drove east on U.S. 15, then picked up Red Rock Pass Road, which we took up the valley to its junction with the Continental Divide Trail. We parked nearby to begin what turned out to be a hike of about three miles into Hell Roaring Canyon. At a point where the trail veers west we left it and followed Hell Roaring Creek to its source. With the aid of a map from Brower’s book and several modern topographic maps we found the spring without much difficulty—a trickle oozing out of a bed of moss—and the rock cairn that John Montague had told us about. Under the rocks we found the jar. We added a slip of paper inscribed with our names, then carefully reburied the jar.

Unfortunately, we were unable to locate Brower’s copper plate, in part because our search for it was cut short by a medical emergency—a broken ankle suffered by John E. “Jack” Taylor, a well-known Lewis and Clark guide from Helena. The rest of the day was a series of adventures. A young couple took off on a 20-mile trip to fetch help from the closest Ranger station. In short order a helicopter arrived but was driven off by a thunderstorm. We wound up helping Jack down to the trail head and loading him into a camper. While two of us drove him to the Bozeman hospital via Red Rock Pass and the Gallatin Valley, the rest of us returned to our motel in Lima.

Despite the medical mishap and a thorough drenching by the thunderstorm, we felt exhilarated by our ex-
experience on the mountain. It had been a supreme moment. Like McNeal 190 years before, we too had straddled a creek on the Continental Divide. And we knew that our creek, unlike McNeal’s, was the true source of the Missouri.

**The Missouri System**

Two centuries after Lewis and Clark named them, the three beautiful rivers that converge to form the Missouri still wind their glistening ways through some of America’s most scenic landscapes. From east to west, they are the Gallatin, one of the nation’s few remaining undammed rivers; the Madison, a world-renowned trout fishery; and the Jefferson, where, several years after the Corps of Discovery’s return, Blackfeet Indians killed two of its former members, John Potts and George Drouillard, and set a third, John Colter, running naked for his life.

The Gallatin rises in Yellowstone Park’s Gallatin Lake, some 12 miles southwest of Mammoth Hot Springs. Gallatin Lake’s altitude is about 9,000 feet, and its geographic coordinates are 110° 53’ W by 44° 51’ N. After issuing from the lake, the river carves its way north through Gallatin Canyon and past the ski resort of Big Sky and Bozeman to Three Forks. Its total length is 115.4 miles.

The Madison River also originates in the Park. Its source, which lies at 8,500 feet, is Madison Lake, about seven miles south of Old Faithful geyser. Madison Lake’s coordinates are 110° 52’ W by 44° 21’ N. The stream discharging from the lake is called the Firehole River for its many hot springs. The Firehole flows north about 20 miles. It passes Old Faithful, Yellowstone’s most famous geyser, and joins the Gibbon River coming in from the east; the Madison proper begins at their junction. From Madison Lake to Three Forks the river is 177.3 miles long.

The Jefferson, as noted, issues from what we have chosen to call Brower’s Spring (to our knowledge, cartographers have not officially named it). Brower’s Spring lies at roughly 8,500 feet, and its coordinates are 111° 29’ W by 44° 33’ N. The Jefferson begins as Hell Roaring Creek, named for the noise of its riffles and falls as it passes through a gap that Brower named Culver’s Cañon for his co-explorer. After entering a subalpine valley, Hell Roaring Creek joins Red Rock Creek, which flows west into Upper and Lower Red Rock Lakes. The larger stream that emerges from the lower lake is called Red Rock River. It bears north through the Lima Reservoir and past the town of Lima, then joins Horse Prairie Creek at Clark Canyon Reservoir (whose waters cover the site of the Corps of Discovery’s Camp Fortunate). Below Clark Canyon Reservoir the river becomes first the Beaverhead, then, at its junction with the Big Hole just north of Twin Bridges, the Jefferson. The river’s total distance from Brower’s Spring to the junction with the Madison, at Three Forks, is 298.3 miles.

The main stem of the Missouri runs 2,341 miles from Three Forks to its junction with the Mississippi, north of St. Louis. From there, a molecule of water that began its journey to the ocean at Brower’s Spring would have to travel another 1,003 miles to reach New Orleans and an additional 103 miles after that to reach the Gulf of Mexico. The total river distance from Brower’s Spring to the ocean is 3,745 miles, making the Missouri system (including the main stem of the Mississippi) the world’s third longest, after the Nile and the Amazon.

Meriwether Lewis never saw Brower’s Spring or knew of its existence. For the captain, the “distant fountain” at the head of Trail Creek was the source of the Missouri for practical purposes if not in fact. From there on that morning of August 12, 1805, it must have taken him only a few minutes to go from the spring to “the top of the dividing ridge from which I discovered immense ranges of high mountains still to the West.” However imposing or intimidating those mountains must have seemed, he had reached the Continental Divide. The going would still be perilous, but by early November they would at last be camped at the mouth of the Columbia River. The spring at Trail Creek is not really the source of the Missouri, but it was an important milestone nonetheless, and for the Corps of Discovery it would do.
Don Nell lives in Bozeman, Montana. He is a past president of the Foundation and remains active in regional Lewis and Clark activities. Anthony Demetriades, an emeritus professor of engineering at Montana State University and a past director of the Gallatin Lewis and Clark Bicentennial Association, lives in the Centennial Valley, just a few miles from Brower’s Spring.

Notes
2 Moulton, p. 7; Nell and Taylor, p. 35.
3 Albert Gallatin was secretary of treasury and James Madison secretary of state. The Gallatin is the easternmost of the three rivers to enter the Missouri proper, followed by the Madison and the Jefferson.
4 See, for example, Montana Atlas and Gazetteer, 2nd Edition (Yarmouth, Me.: Delorme, 1997), p. 40. The Gallatin, whose mouth has shifted east over the years, now enters the Missouri approximately one mile downstream of the junction of the Madison with the Jefferson.
5 Jacob V. Brower, The Missouri River and Its Utmost Source: Curtailed Narration of Geologic, Primitive and Geographic Distinctions Descriptive of the Evolution and Discovery of the River and Its Headwaters (St. Paul: Pioneer Press, 1896). This edition includes the map shown on page 29; the more detailed map shown above was published in an 1897 edition. Brower (1844-1905) led a multifaceted life. A soldier and sailor during the Civil War, he later served as a Minnesota legislator and was the president of a railroad and owner of several newspapers. See the Web site http://tigger.stcloudstate.edu/~brower/brower.html.
6 Brower, pp. 112-113. Brower’s use of the term “little rivulet” echoes Lewis’s journal entry of August 12, 1805. This is probably a coincidence, but maybe not. Elliott Coues’s edition of the Lewis and Clark journals had been published in 1893, and Brower refers to it on p. 71. The Coues edition is based on the 1814 paraphrase of the journals by Nicholas Biddle. In his description of Lewis’s ascent of Trail Creek, Coues does not use the term “little rivulet,” but in a footnote he quotes Lewis’s entry verbatim, and it’s reasonable to assume that Brower had read this passage. In the same footnote Coues makes it clear that the spring at the head of Trail Creek could not be the source of the Missouri, which instead must be “many miles eastward … at the highest fountain which feeds Red Rock lake.” See Elliott Coues, ed., The History of the Lewis and Clark Expedition, 3 volumes (New York: Francis P. Harper, 1893), Vol. 2, p. 484.
7 Ibid., p. 113.
8 Here and in the following two paragraphs, the stream mileages are taken from River Mile Index of the Missouri River (Helena: Water Resources Division, Montana Department of Natural Resources and Conservation, January 1979), pp. 105-142. For their assistance the authors thank James Kalitowski of the NRSC’s Bozeman office and Gerry Daumiller of the Montana Natural Resource Information System.
9 Ibid. According to the DNRC report, the main stem of the Jefferson contributes 83.5 miles to its total length, the Beaverhead 80.4 miles, and the Red Rock-Hell Roaring Creek system 134.4 miles.
10 This is the Missouri’s “official” length, but readers should be aware that recorded lengths of the Missouri and, for that matter, all rivers may vary according to the methodologies of geographers and the shifting of river beds. See Missouri River Environmental Assessment Program (Lewistown, Mont.: Missouri River Basin Association Report, 1996).
11 David Crystal, ed., The Cambridge Factfinder, 4th edition (Cambridge: Cambridge University Press, 2000), p. 42. The Mississippi begins at Lake Itasca, in northern Minnesota—a source confirmed by Jacob V. Brower in 1893, two years before he discovered the source of the Missouri. See Jacob V. Brower, The Mississippi River and Its Source (Minneapolis: Harrison & Smith, 1893). The Mississippi above its junction with the Missouri is about 1,070 miles long, less than half the length of the Missouri above its junction with the Mississippi.
A ramble through bear country with Lewis and Clark

Lewis and Clark among the Grizzlies: Legend and Legacy in the American West
Paul Schullery
Falcon / Globe Pequot Press
247 pages / $14.95 paper

This book would make a good gift for someone keen about wildlife, hunting, or the outdoors but put off by thick volumes of western history and exploration. *Lewis and Clark among the Grizzlies* narrates all the encounters the explorers had with bears—62 sightings of grizzlies (by a conservative count) along with observations of black bears and evidence from skins, scat, and scuttlebutt along the trail from St. Louis to the Pacific and back.

This detailed information could make slow reading, but author Paul Schullery quickens the pace with lore and questions about biology, history, mythology, geography, and archeology. He repeats some good hunting stories and tall tales, and includes many apt illustrations. Having written and edited many books on the outdoors, he draws freely on his own experiences and those of friends in the field. He’s not afraid to say “I” and to challenge many received assumptions by citing recent research.

The result is a conversational, even chatty ramble rather than a scholarly treatise. At his best, Schullery takes the reader along on armchair forays, chasing accurate information about particular incidents and their implications. He quotes all the available journals and so brings out new dimensions of the most famous bear stories. By tracing the distortions of hunters, naturalists, and editors, he reveals how errors and legends have grown over the years and clouded the sharp observations of the Corps of Discovery. At the heart of this book, of course, he follows the great hunt the expedition made in tracking grizzlies, confronting them, killing and measuring them, and watching new details about them emerge day after day.

Critical readers will note some omissions. *Lewis and Clark among the Grizzlies* does not, in fact, say everything that could be said on its topic. It is odd, for example, that Schullery ignores an American classic: William Faulkner’s *The Bear*, a brilliant hunting story about a huge black bear that embodies American wilderness.

These criticisms, however, may reveal a strength in Schullery’s book. In the main he keeps his eyes trained on western grizzlies, the journal records, and up-to-date science. Readers will have various opinions about the matters he discusses, and will be forced to think again with better information. In this light, his book makes a neat introduction to Lewis and Clark as members of the Lewis and Clark Foundation know them. It traces a single, exciting thread of the expedition experience. Yet it points to the many kinds of learning the captains touched and improved, and the many kinds of questioning we still practice in following their footsteps.

—Albert Furtwangler
The captains as medical men: doing the best with what they knew

Dr. Eldon G. Chuinard’s landmark study, *Only One Man Died: The Medical Aspects of the Lewis and Clark Expedition* (1979) is now complemented by *Or Perish in the Attempt: Wilderness Medicine in the Lewis & Clark Expedition*, by Dr. David J. Peck.

An authority on wilderness medicine, Peck presents the medical problems faced by the Corps of Discovery and its two primary dispensers of medical care, Meriwether Lewis and William Clark. He describes the illnesses and injuries as the two captains saw them, then offers his own observations concerning the validity of their diagnoses and treatments.

Blood letting and the use of cathartics for patients with dysentery are just two of many examples of the captains’ methods that make Peck and other modern practitioners tremble. The author reminds us, however, that they did the best they could given the circumstances and the state of medical knowledge at the time. He also suggests that curing an ailment or at least relieving its symptoms can owe as much to the “laying on of hands” as it can to scientifically valid diagnosis and treatment. This placebo effect probably helped “cure” Bratton’s chronically bad sore about a mile upriver from his grave. Such nitpicking aside, *Or Perish in the Attempt* makes for informative reading. After finishing it, one might agree with an observation by Jefferson: “The patient treated in a fashionable theory sometimes gets well in spite of the medicine.”

—White McKenzie Wallenborn, M.D.

In Brief: Olin Wheeler; Larry McMurtry; Gass

*The Trail of Lewis and Clark*, by Olin D. Wheeler. Originally published in 1904 as part of the Lewis and Clark centennial celebration and long out of print, Wheeler’s history and travelog of the expedition retraces the explorers’ steps from Camp River Dubois to Fort Clatsop and back. Wheeler stopped at all the principal landmarks, and it is interesting to juxtapose his early 20th-century descriptions of Floyd’s Bluff, Missouri about a mile upriver from his grave. Such nitpicking aside, *Or Perish in the Attempt* makes for informative reading. After finishing it, one might agree with an observation by Jefferson: “The patient treated in a fashionable theory sometimes gets well in spite of the medicine.”

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—White McKenzie Wallenborn, M.D.
Books reflects on the literature of the American West. The title essay and another, titled “America’s Epic,” deal at length with the Lewis and Clark journals as edited by Gary Moulton. McMurtry, a prolific novelist best known for Lonesome Dove, his saga of the open-range cowboy, regards the journals as the first and best of all western narratives, looming over later accounts “as the Rockies loom over the rivers that run through them.” Although his take on the West is mostly ironic, McMurtry remains sympathetic to traditionally romantic and heroic views. As he notes, frontier scholarship has been engaged in “a long, hot debate between revisionists and triumphalists [and] the revisionists are solidly in command.” The Lewis and Clark story is a reminder that the heroic still has its place in the story of westward expansion. In the journals, Lewis and Clark and the expedition’s other diarists, observes McMurtry, “accomplished the one essential that writers must do: they brought the reader along with them, up that meandering river and over those snowy peaks.” ($19.95, hardback; New York Review Books.)

- **Sergeant Patrick Gass, Chief Carpenter: On the Trail with Lewis & Clark**, by William Kloefkorn. This is not a biography of Patrick Gass—at least not in any conventional sense—but rather a collection of untitled free-verse poems that collectively form a narrative of the expedition as told in the voice of Gass. As the author states in his preface, “Though not a poet, Sergeant Gass nonetheless had a lot of poetry in him; he observed closely both flora and fauna, and his keen eye and wry sense of humor indicate that he had some of the essentials for the making of a bard.” Kloefkorn’s “imaginative extrapolations” of what he knows of Gass through his journal and those of the captains and other members of the Corps of Discovery take us inside the mind of “a carpenter whose respect for timber and for the life-sustaining shelter that timber can provide was akin to passion.” As Gass the poet-narrator puts it, “Give me time, a river, and a cluster of tools / and I will build us a house made of driftwood.” ($12, paper; Spoon River Poetry Press.)

- **Best Little Stories from the Wild West**, by C. Brian Kelly. This fast-paced, episodic history of the American West comprises a series of brief narratives, starting with eight vignettes relating in one way or another to the Lewis and Clark Expedition. There are pieces on the two captains, Blackbird (the Omaha chief buried astride his horse on a hill overlooking the Missouri), the conspiratorial General James Wilkinson (the U.S. Army’s top commander and Lewis’s predecessor as governor of Louisiana), York, and yet another review of the facts and theories surrounding Lewis’s death. A little further along are pieces on the post-expedition lives of John Colter, Baptiste Charbonneau (a.k.a. Pompey), and Sacagawea, who appears in an extended essay on “Fascinating Women of the West,” by Ingrid Smyer—all part of a grand flow of mountain men, lawmen, outlaws, Indians, and other frontier archetypes.

The author, who quotes liberally from secondary sources ranging from the works of popular historians such as Stephen Ambrose to recent articles in WPO to various Web sites, makes no pretense at writing serious scholarly history, and his breezy style may put off some. But it’s all done engagingly and in a way that connects the Corps of Discovery with the larger stream of westward expansion. ($16.95, paper; Cumberland House.)

*These titles can be ordered through local and Web-based bookstores and in most cases from the publisher’s Web site (check google.com or other search engines).*
Digital Scanning, Inc. -
Olin Wheeler, 2 volume
“The Trail of Lewis & Clark”
1/2 page horizontal
7 1/4” x 4 5/8”
Rebecca will send.

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the L&C Journals
1/2 page horizontal

PICKUP from p. 39,
August 2002 WPO
New Foundation leadership; annual awards; Bush honors explorers

NEW PRESIDENT
Larry Epstein, of Cut Bank, Montana, was elected the Foundation’s president at the annual board meeting held in July in Louisville, Kentucky. Epstein’s interest in Lewis and Clark goes back 40 years, to his days as a Boy Scout in Cut Bank, when he and other members of his troop located what he believes to be the “Fight Site” where on July 27, 1806, Lewis and three others tangled with a band of Indians (either Blackfeet or Gros Ventres of the Prairie).

A Navy veteran and an alumnus of the University of Montana (B.A. and L.L.B.) Epstein is a partner in the Cut Bank law firm founded by Wilbur Werner, one of the Foundation’s early presidents. In the 1980s, Werner enlisted Epstein and his wife, Callie, as unofficial tour guides of the Fight Site. He also “volunteered” Epstein for Foundation committee assignments and eventually a position on the board of directors.

“It’s so exciting and interesting to be serving during the first year of the Lewis and Clark Bicentennial,” says Epstein. “What an opportunity! My goal will be to stress education about the expedition at all levels, from preschool to college. The Foundation is the ‘keeper of the story,’ and we will be called upon to provide the underlying, accurate educational component to this commemoration.”

OTHER OFFICERS
Besides Epstein, Foundation officers for 2002-03 include president-elect Ron Laycock, of Benson, Minnesota; vice-president Gordon Julich, of Blue Springs, Missouri; secretary Jane Schmoyer-Weber, of Great Falls, Montana; and treasurer Steven G. Lee, of Clarkston, Washington. Appointed to three-year terms as directors were Charles Cook, of Billings, Montana; James Gramentine, of Meguon, Wisconsin; and Roger Wendlick, of Portland, Oregon.

2002 KUDOS
Save a landmark from the gravel crusher, shed new light on the life of William Clark, and return a piece of prairie to legend—the LCTHF recognized all these efforts, and more, in this year’s Foundation awards, presented at the annual meeting in Louisville.

Winners of the 2002 Meritorious Achievement Awards are Cheryl Hutchinson, of Cascade, Montana; James J. Holmberg, of Louisville; and the Lewis & Clark–Spirit Mound Trust. In other kudos, Youth Achievement Awards went to the Lewis & Clark Fife & Drum Corps of St. Charles, Missouri, and to students and teachers at Wydown Middle School, in Clayton, Missouri. Certificates of Appreciation were awarded to Holmberg; James Mallory, of Lexington, Kentucky; and Jane Henley, of Charlotteville, Virginia.

Cheryl Hutchinson convinced the state of Montana to keep Tower Rock in public ownership. Tower Rock overlooks the Missouri River near the Gates of the Mountains, about 30 miles south of Great Falls. It was here that Meriwether Lewis noted “a most pleasing view” of immense herds of buffalo. Hutchinson drives past Tower Rock daily and two years ago saw a “For Sale” sign at its base, near where some quarrying had already occurred. She alerted the LCTHF and also called the Montana Department of Transportation, which owns the site, and pointed out its significance. Her efforts led to the decision to keep Tower Rock in public ownership. As president of the Foundation’s recently formed Reaching the Rockies Chapter, Hutchinson is now working for the erection of an interpretive sign to be placed at a highway interchange near Tower Rock.

James Holmberg, curator of special collections at the Filson Historical Society, led the Foundation effort to reprint an updated version of Robert B. Betts’s In Search of York: The Slave Who Went to the Pacific with Lewis and Clark. He also edited the acclaimed Dear Brother: Letters from William Clark to Jonathan Clark, jointly published this year by Yale University Press and the Filson Historical Society.

The Lewis and Clark–Spirit Mound Trust was established to restore Spirit Mound, a Lewis and Clark site on the Missouri five miles north of Vermillion, South Dakota. The Corps of Discovery stopped there on August 24, 1804. Clark recorded that the Indians regarded the mound as “a place of Deavels” that in human form stood 18 inches high, with “remarkable large heads,” and whose arrows could kill “at a great distance.” After the region was settled, Spirit Mound became a farm and eventually a feedlot. Members of the trust, including Larry Monfore and Amond Hanson, raised public and private funds to purchase the 320-acre site and reseed it with prairie grasses. Kent Scribner and Jim Peterson accepted the award on behalf of the trust.

The Lewis & Clark Fife & Drum Corps of St. Charles, Missouri, is the only organization of its type dedicated to Lewis and Clark and the time period of the expedition. It was formed in 1992, and more than 100 students ages 9-18 have performed with the group throughout the U.S. and abroad.

Students and teachers at Wydown Middle School, in Clayton, Missouri, have developed an interdisciplinary curriculum based on the expedition. An example of the work they have done involves calculating the shape, size, and proportions of the lead canisters holding the explorers’ gunpowder. Other
students produced a Web cast of the St. Charles–based Discovery Expedition, the well-known group of reenactors who cruise the Missouri in replicas of the Corps of Discovery’s keelboat and two pirogues. The Web cast sends lives images and sound from the boats to the classroom, enabling students to interact with the reenactors in real time. The students plan to expand the Web casts to other schools around the nation.

The Certificates of Appreciation recognized the recipients’ efforts over many years to preserve and perpetuate the historical legacy of the Lewis and Clark Expedition. James Holmberg and James Mallory have been instrumental in publicizing the importance of the Falls of the Ohio area, where many of the expedition’s core members were recruited. Jane Henley was a founder of the Charlottesville-based Homefront Chapter and is the Foundation’s immediate past president.

**WHITE HOUSE CEREMONIES**

Pictured right, under a portrait of Thomas Jefferson, are Hal Stearns, Carol Bronson, and Jane Henley, who helped represent the Foundation at a White House ceremony held July 3 recognizing the importance of the Lewis and Clark Expedition and the upcoming bicentennial. President Bush issued a proclamation commending the Corps of Discovery for its “resourcefulness, determination, and bravery.”

In his remarks, the President noted that the “expedition lasted just a couple of years, but it changed the face of our country forever. It opened up the American West for future development. It increased our knowledge of our natural resources. It helped us gain a better understanding of America’s native cultures. Most importantly, the Lewis and Clark Expedition will stand forever as a monument to the American spirit, a spirit of optimism and courage and persistence in the face of adversity.” Bush singled out Sacagawea, whose “courage and strength remind us that American Indians have played a central role in our history, and their unique culture must never be lost”—and stressed the importance of tribal colleges in helping to preserve “irreplaceable languages and cultural traditions.” L&C editor Gary Moulton also spoke at the ceremony—see page 44 for his remarks. For the complete texts of all remarks, see the Web site www.whitehouse.gov/news/releases/2002/07/20020703-9.html.

**FOUNDATION RESUMES GRANTS**

The LCTHF has reactivated its monetary grants program, whose purpose since its founding more than 20 years ago has been to stimulate and increase public knowledge about the Corps of Discovery. Over two decades it has supported a variety of projects with grants ranging from $200 to $1,000, including scholarly research, musical and theatrical productions, museum exhibits, community events, and youth activities. Grant applications are processed by the Monetary Grants Committee, chaired by Barb Kubik. In descending order, the committee’s preferences are projects related to scholarly research and publication, research and development of interpretive signage, construction or restoration projects, constructions and installation of interpretive signage, youth activities, and creative and performing arts. The application deadline is March 15. For further details, call the Foundation’s office in Great Falls (888-701-3434).

**SACAGAWEA STANDS TALL**

Residents of Idaho have honored Sacagawea by commissioning Boise sculptor A. Vincen “Rusty” Talbot to produce a 6-foot-3-inch bronze statue of the celebrated Shoshone. The recently completed work will be erected in Boise at ceremonies planned for January as the kickoff event of Idaho’s bicentennial commemoration. A duplicate of the statue will be placed at the new interpretive center near Salmon, Idaho. The project was initiated in 1998 by Lydia Justice Edwards, then Idaho’s secretary of state, and carried on by Don Riley, a retired businessman, and Talbot, aided by historian Carol Lynn MacGregor, Sacagawea author Ken Tomasma, and others. Riley and Talbot have raised more than $17,500 for the project, much of it from school children, and received another $16,500 from the state.
next summer’s 35th annual meeting of the Foundation. Titled “The Quest for Knowledge: Lewis in Philadelphia,” it will be held August 10-13. Events will include historic house tours and visits to the American Philosophical Society and the Academy of Natural Sciences to examine original journals of the expedition and plant specimens collected by Lewis. For more information, see the Web site www.lewisandclarkphila.org/annual.html. Registration forms and other materials are included in the mailing of this issue of WPO.

ST. LOUIS SYMPOSIUM
The Jefferson National Expansion Memorial, in conjunction with the Missouri Historical Society and the Spanish Colonial Research Center of the National Park Service, will host a symposium next March 20-22 in St. Louis, entitled “Lewis and Clark: Observations on an Expedition.” The focus will be on topics relating to the Lewis and Clark Expedition and its preparations, personnel, relations with European governments and American Indian nations, and the difficulties of the journey. The 32 speakers will include James Ronda, John Logan Allen, Daniel Botkin, James Holmberg, Roger Kennedy, Landon Jones, William Foley, Jon Kukla, Carolyn Gilman, David Peck, Joseph Mussulman, Jay Buckley, Carol Lynn MacGregor, James Thom, and Amy Mossett.

For registration forms and additional information, see the insert in this edition of WPO or the Web site www.nps.gov/jeff/LewisClark2/TheBicentennial/Symposium2003/Symposium2003.htm. Questions may also be directed to Bob Moore, Historian, Jefferson National Expansion Memorial, 11 North 4th Street, St. Louis, MO 63102. (314-655-1629; Fax: 314-655-1642; Bob_Moore@nps.gov.)

MISSOULA CONFERENCE
“A Confluence of Cultures: Native Americans and the Expedition of Lewis and Clark” is the title of a symposium to be held next May 28-31 in Missoula, Montana. Sponsored by the University of Montana–Missoula and the Montana Lewis and Clark Bicentennial Commission, the conference will examine and compare the cultural practices of the new United States and those of the Indian nations encountered by the Corps of Discovery. The conference planners encourage the involvement of faculty and students from tribal colleges and universities. For more information, see the Web site www.umt.edu/cultures; e-mail cultures@mso.umt.edu; call 406-243-6093; or write Symposium Coordinator, Confluence of Cultures, James Todd Building, University of Montana, Missoula, MT 59812.

BRONZE UNVEILED
A 14-foot bronze sculpture of Lewis and Clark and Lewis’s Newfoundland dog, Seaman, was unveiled on August 15 in Sioux City, Iowa, in ceremonies that also included the raising of a 30-by-50-foot replica of the 15-star, 15-stripe flag carried by the Corps of Discovery.

Titled “The Spirit of Discovery,” the bronze was created by Pat Kennedy, a sculptor from Loveland, Colorado. The bronze and the flag are on the same site on the Missouri River as the city’s new L&C interpretive center. Among other exhibits, this $3.5 million, 8,750-square-foot facility, which opened September 21, features panoramic murals and animatronic mannequins of Lewis and Clark. The costs of the bronze, flag, and center are underwritten by Missouri River Historical Development, Inc., a nonprofit organization whose income derives from gaming aboard the riverboat Belle of Sioux City.

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How will the future find us?

Excitement is high now as we approach the Bicentennial that will dramatically share the Story and the Trail with thousands who at this time know them only vaguely.

The Lewis and Clark Trail Heritage Foundation has been key to readiness for the Bicentennial, and the Foundation needs to remain on duty and on guard long after the last Signature Event has followed Corps I and II into history.

How well will we handle that task? Recent times have been hard, with income barely adequate to cover the basic programs. Our Library, with its rich resources for research and study, has been particularly handicapped, understaffed, and often closed.

But as we look ahead, we can see a path, a way that will take us over our Mountains! You read in the May 2002, issue of WPO, page 44, about the late, longtime LCTHF member, Bob Shattuck, who made several generous estate gifts to the Foundation: valuable, interesting books, and a monetary portion of his assets. What incredible provisions for the Foundation’s journey forward!

To do this — and much like the Captains before him — Mr. Shattuck had to look ahead, think ahead, and act. He wanted to add strength to an organization whose mission resonated with his own goals and interests, and he knew that financial stability is vital to that mission. He saw that he could help, and he did.

Thank you, Bob Shattuck! There are still mountains ahead, but friends like you can help the Foundation over them and into a strong future of service to our nation’s heritage!

L&C Roundup (cont.)

Lottesville, Virginia, January 14-19. The highlight of the six-day event—the formal kickoff of the L&C Bicentennial—will take place Saturday, January 18, at Monticello, Jefferson’s mountaintop home. For more information, see the ad on page 5 or the Web site www.monticello.org/jefferson/lewisandclark.

Future bicentennial signature events will be held at Louisville, Kentucky, October 14-26, 2003; St. Louis, March 12-14, 2004; Hartford, Illinois, May 13-16, 2004; St. Charles, Missouri, May 14-23, 2004; Atchison, Kansas, July 3-4, 2004; Fort Calhoun, Nebraska, July 31-August 3, 2004; Chamberlain, South Dakota, August 27-28, 2004; Bismarck, North Dakota, October 23-31, 2004; Great Falls, Montana, June 1-July 4, 2005; Astoria, Oregon, November 24-27, 2005; Billings, Montana, July 22-25, 2006; Bismarck, North Dakota, August 17-20, 2006; Lewiston, Idaho, June 14-17, 2006; and St. Louis, September 23, 2006. For more details, see the Web site www.lewisandclark200.org/calendar/signature_events/sig_events2.html.

L&C in other publications

“Iron Will,” an article in the August Smithsonian by Landon Y. Jones, tells the story of William Clark in his post-expedition role as the chief arbiter of Indian-white relations on the frontier.

“The record is clear,” writes Jones, “that Clark’s efforts to reconcile the clashing interests of Indians, westward moving settlers and the federal government consumed—and profoundly disappointed—him [and] led to an overwhelming tragedy: the forced relocation of tens of thousands of Indians from their home in the East and South, across the Mississippi to lands in Oklahoma and Kansas.”

The July issue of William and Mary Quarterly includes a lengthy analytical essay by Andrew R.L. Cayton about three important Lewis and Clark books: Dayton Duncan’s Out West: A Journey Through Lewis and Clark’s America, the 13-volume Journals of the Lewis & Clark Expedition (edited by Gary E. Moulton), and James P.
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**THE MYSTERY OF LOST TRAIL PASS**

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t is a great honor to be here today for the unveiling of this portrait and the display of items from the expedition, an occasion which gives us an opportunity to celebrate and contemplate the life of Meriwether Lewis, especially his expedition across the continent with his good friend, William Clark, and the band of men they came to call the Corps of Discovery. Our earliest school-day memories probably include stories of Lewis and Clark, and the names have become so intertwined that we can hardly say one without the other, Lewis & Clark. But today our attention is given to Lewis.

July the third, 1806, one hundred and ninety-six years ago today, was one of those pivotal days for Lewis and Clark. Two men—inevitable in history—were about to separate. It was the first time during the expedition that they were to be apart for such a long time and over so great a distance. Lewis admitted, “I could not avoid feeling much concern on this occasion[,] although I hoped this separation was only momentary.” It was, in fact, nearly six weeks before these friends were together once again.

Just three days earlier, the party had established camp at a spot that has come to be called Travelers’ Rest, after the captains’ name for the adjacent creek. It is modern Lolo Creek, near today’s Missoula, Montana. The party had also camped here on the outbound journey—resting up after a difficult journey through the Rocky Mountains and reviving themselves before taking on the laborious Lolo Trail. Lewis called that trail the “wretched portion of our journey … where hungar and cold in their most rigorous forms assail the waried traveller.” Now on the return, the camp was also a respite for weary travelers who had trudged through deep mountain snows to get to this point.

But rest was never a priority for Lewis, especially at a place that afforded so many opportunities for discoveries of previously unknown plants. The day after arriving at Travelers Rest Lewis went on a botanical excursion and gathered a number of new plants, among them a small plant that he may have noticed earlier. The previous year he had tasted the plant’s root, a staple of the Rocky Mountains Indian diet, and called it “naucious to my pallate.” Now he saw it in bloom and collected a specimen from the dry, sandy soil. We don’t know what drew the captain’s attention to the plant, but it was blooming late that year and its delicate pink flowers may have caught his eye. The showy little plant was plucked from the ground, pressed between collecting sheets, and preserved for scientists in the East. Lewis knew that he was seeing a plant new to science, so he was fulfilling his mission to describe and collect the flora of the West. Then he carried it and the rest of his collection some 3,000 miles by boat, horseback, and carriage to Philadelphia and to his scientific advisers.

In Philadelphia Lewis hired Frederick Pursh, a German botanist then in the city, to examine and describe his collection in preparation for his history of the expedition. Lewis died before the book was completed and Pursh turned to writing his own book about the flora of North America, in which Lewis’s botanical collection formed an essential part. Despite Lewis’s significant contributions Pursh gave him little credit, but he did name the pink plant of the Rockies in Lewis’s honor and designated it, *Lewisia rediviva*. It is better known by its common name, bitterroot, a term that is also applied to the Bitterroot River and to the Bitterroot Mountains, terrain well-known to Lewis and Clark. And the plant itself is the state flower of Montana.

Pursh chose the second part of the name scientific name, *rediviva* (or reviving one), because of a singular phenomenon he noticed about the plant. After being packed away in Lewis’s collection for more than a year, the root was taken out, planted, and it sprang to life in spite of the damp climate and inhospitable soil of Philadelphia. After Pursh’s work with the collection, the bitterroot, along with the remainder of Lewis’s herbarium, was deposited in Philadelphia, where the bitterroot specimen rests today. It’s but a shadow of the plant Lewis collected. The root is gone, of course, used up in reviving itself one last time, and only six tiny flowers and a few stems remain.

Yet, it speaks to our presence in this room today. The reviving powers of a small plant of the Bitterroots reflect the restoration of the Lewis and Clark story from one generation to the next. Stories of endurance, courage, and accomplishment such as those of Lewis and Clark never die. They revive our spirits by reminding us of human achievement in the face of seemingly insurmountable odds and for the greater good of humankind.

Once again we have the chance to tell the Lewis and Clark story to another generation. And we now have an incredible array of resources in place to enable us to get it out. With Stephen Ambrose’s estimable biography of Lewis, Ken Burns’s superb film of the expedition, and National Geographic’s grand IMAX, plus scores of books, essays, pamphlets, and periodicals, and the modern means of Web sites, CDs, and curriculum guides, we can teach, learn, and revel in the story as never before. Monticello will inaugurate the event in January, the Missouri Historical Society will mount a national traveling exhibit, and organizations like the National Park Service, the National Council of the Lewis and Clark Bicentennial, and the Lewis and Clark Trail Heritage Foundation will guide us as we’re swept along across the continent with Lewis and Clark and their twenty-first century followers.

Join us as we revive once more this wonderful story of an expedition of discovery.*

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*Gary E. Moulton is editor of the 13-volume Journals of the Lewis & Clark Expedition (University of Nebraska Press).*
Ronda’s *Finding the West: Explorations with Lewis and Clark*. The title of the essay is “Looking for America with Lewis and Clark.” Observes Cayton, “The expedition has all the elements of an adolescent male adventure. No small part of the enduring appeal of the Lewis and Clark expedition, in fact, is that it seems relatively benign. Their motives were good, their behavior generally decent (notwithstanding Lewis’s outbursts of temper and hostility to Native Americans), their expedition difficult but not impossible, dangerous but not deadly.” Available online through www.historycooperative.org/wmindex/index.html.

The April issue of *National Geographic* includes an article by Cathy Riggs Salter titled “Lewis and Clark’s Lost Missouri.” The magazine’s Web site has the first few paragraphs of the article, some of the photos, and a list of the magazine’s previous articles relating to Lewis and Clark (dating from 1895). See http://magma.nationalgeographic.com/ngm/0204/feature5/index.html.

*National Geographic* Traveler’s March issue features “Lewis & Clark: Trouble on the Trail?” This article, by Geoffrey O’Gara, focuses on trail stewardship as land owners gird for the L&C Bicentennial.

The online magazine *Slate* (www.slate.com) has an article by David Plotz posted August 16 and titled “Lewis and Clark: Stop celebrating. They don’t matter,” which argues that the expedition “produced nothing useful” and essentially had no bearing on the future history of westward expansion. “Like the moon landing,” the author asserts, “the Lewis and Clark expedition was inspiring, poetic, metaphorical, and ultimately insignificant.”

**EDUCATION PROJECT**

The National Lewis and Clark Education Project is seeking educators and institutions interested in participating in its efforts. Based at the University of Montana, the project supports L&C-related education throughout the country through an interactive Web site (www.lewisandclarkeducationcenter.com). Its facilities include a mobile computing lab and GPS technology to explore landscape changes along the L&C Trail. For more information, contact Jeff Crews (406-243-2644; jcrews@eoscenter.com).

**CHAPTER NEWS**

The Foundation welcomes seven new regional chapters, bringing the total number of chapters to 38. They are the Missouri-Yellowstone Confluence Chapter, encompassing the northwest North Dakota–northeast Montana area (Robert Thomson, president); the Central South Dakota: Encounter on the Prairie Chapter (Bill Stevens, president); the Florida Chapter (Art Litka, president); the Reaching the Rockies

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Chapter, in Cascade, Montana (Cheryl Hutchinson, president); the Celilo/The Dalles Chapter, in Oregon (Gary Honald, president); and the Meriwether Lewis Chapter, in Hohenwald, Tennessee (Patty Choate, president).

CAMPSITE FOUND?
What may be a Corps of Discovery campsite has been located at Lolo, Montana. Archaeologists excavating a possible latrine used by the Lewis and Clark Expedition at Travelers’ Rest found a 50-centimeter-deep layer of soil with significant concentrations of mercury, a metal absent from layers above and below. The archaeologists theorize that the mercury was in the excrement of those explorers treated with “Rush’s thunderbolts,” the powerful purgative and all-purpose medicine whose primary active ingredient was mercury.

FOR THE RECORD
Several items in the May 2002 WPO: The caption on page 13 accompanying the drawing of the Teton Sioux’s run-in with the Corps of Discovery at Bad River should have stated that the warrior locked his arms around the mast of one of the pirogues, not the keelboat. The caption on page 16 should have said that the Teton Sioux ceremony depicted by artist George Catlin occurred 28 years after Lewis and Clark’s encounter with that tribe, not 29 years. The item about the Crimson Bluffs on page 40 should have said that the corps passed the bluffs in July 1805, not May 1805 (the exact date was July 24).

In the May 2001 issue, page 8, we misspelled the name of Tetoharsky, one of the explorers’ Nez Perce guides who accompanied them during part of their descent of the Columbia River. On page 11, we said that Clark in his first journal reference to Beacon Rock on the Columbia called it “Beaten” Rock; we should have noted that on the return trip he spelled it correctly.

Our thanks go to Carl Camp, of Omaha, Nebraska, and Barb Kubik, of Vancouver, Washington, for pointing out some of these items. ■
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Some 460 Lewis and Clark buffs gathered in Louisville July 28-31 for the 34th annual meeting of the LCTHF. It was here at the Falls of the Ohio River that Meriwether Lewis linked up with William Clark to form the most famous partnership in the history of exploration. It was here too that the famed Nine Young Men from Kentucky—the “core” of the Corps of Discovery—were recruited. Louisville was also the home of York, Clark’s African-American manservant and slave, who would play a key role in the expedition. The four-day celebration included lectures and visits to many L&C-associated sites.