

Lewis and Clark in Idaho —A Lesson in Science Under Stress

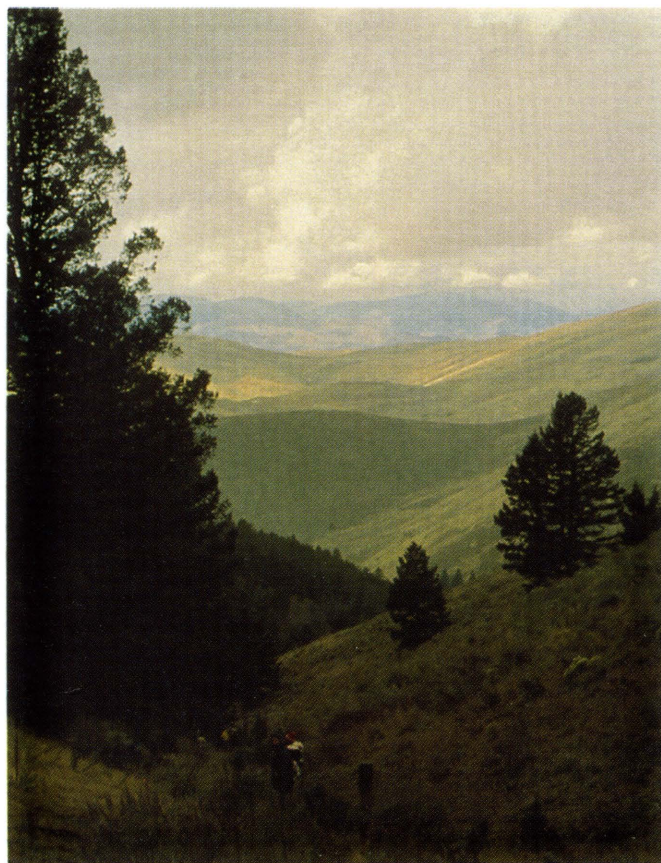
James R. Fazio

When America commemorates the 200th anniversary of the Lewis and Clark Expedition in 2003–2006, journalists and teachers will need to search a thesaurus for words to adequately describe the momentous journey of the Corps of Discovery. Bravery, calculated risk-taking, patience and perseverance are sure to be on the list. Dedication to science should also be there. For among the written instructions provided by President Thomas Jefferson were directions for "observations...to be taken with great pains and accuracy," including those of "the soil and face of the country; its growth and vegetable productions," as well as its animals, minerals, weather, phenology, wind patterns, inhabitants and a host of others (Coues, 1893).

Captains Lewis and Clark dedicated themselves to those duties day and night for 28 months over a distance of some 8,000 grueling miles and through every kind of weather and terrain. Nowhere was this dedication better exemplified than in Idaho.

On August 12, 1805, Lewis became the first Euro-American to enter what is now the state of Idaho. He and three carefully selected companions were days ahead of the main party in a desperate search for Shoshones and their horses. The season was growing late, navigable waters had turned too shallow for travel, and unless horses were obtained it was clearly the end of the daring quest for a route to the Pacific. There was temporary jubilation just short of Lemhi Pass when Private McNeal straddled the little rivulet they had been following and "thanked his god that he had lived to bestride the mighty and heretofore deemed endless Missouri." But the joy was short-lived as the men reached the pass. With one glance to the west—an endless vista of jagged peaks, some tipped with snow—the dreams of Jefferson and a nation were dashed. The land of what is now Idaho was not the short, easy portage they had envisioned between the expanding United States and the waters of the Columbia. And still no Indians or horses in sight.

On that fateful day, with success of the expedition and the hopes of a nation on his shoulders, Lewis intermingled his feelings with descriptions in his journal of the differences between a "heath cock" (sage grouse) he observed for the first time and common "dunghill fowl," grouse, and "prairie hens." When they camped that night, he also described in fine detail a "deep purple currant" (Hudson gooseberry, *Ribes hudsonianum* Rich.).



The view from Lewis and Clark's entry point into Idaho at Lemhi Pass can be seen by modern visitors in almost the same condition observed by the expedition members.

The next day is preserved forever in a lengthy journal entry about Lewis' long-awaited encounter with the Shoshones. The events of this extraordinary day—and the days that followed when Sacagawea was reunited with her brother who turned out to be the chief of the band met by the expedition—seem to have been beyond luck or good planning and more in the realm of divine intervention. The meeting was tenuous, with frightened women, desperate attempts to explain good intentions, and the arrival of 60 armed warriors riding forth at full speed. It was high drama and a historical turning point, but there in the record of it all is Lewis-the-scientist noting for the first time Rocky Mountain maple (*Acer glabrum* Torr.) and comparing the common snowberry (*Symphoricarpos albus* (L.) Blake) with "a species of honeysuckle" he had found growing along the Missouri River.

Lewis and Clark were fond of the Shoshones they met and negotiations for the purchase of horses went well. The captains learned that the Shoshones were without guns, which put this tribe at the mercy both of enemies and the vagaries of food supplies. They were extremely poor, except for their wealth of horses. Each brave had at least one, with a total of 400 estimated by Drouillard. He also counted 20 mules. Eventually, 29 horses were obtained to continue the journey, but no mules. Clark did get to ride on one



Glade Creek near Lolo Pass was noted by the explorers for its clear water and sandy bottom. This historic site was recently purchased from Plum Creek Timber Company for protective management by Idaho Department of Parks and Recreation.

once. He was on foot at the time and a polite Indian offered him the ride. Lewis noted later that the Indians valued their mules highly, parting with them in a trade at the rate of three or four horses for one mule. Lewis judged the Shoshone's mules as "the finest I ever saw," whereas the horses they obtained were generally in poor condition, including sore backs.

There was much discussion through signs and translators, and smoking of *Nicotiana quadrivalvis* (Pursh), a tobacco Lewis said was the same used by the Missouri River tribes and obtained through trade by the Shoshones. He also described one family's food, obtained by George Drouillard in one of the few unpleasant incidents that occurred while in the area of present-day Salmon. While out hunting, Drouillard visited an Indian encampment and talked for about 20 minutes in sign language. As he was catching his horse to depart, the family seized his rifle and rode off with the stolen treasure. A 10-mile chase ensued with Drouillard eventually wrestling the gun from a young brave. Returning to plunder the camp, Drouillard gathered up "a couple of bags wove with the fingers of the bark of the silk-grass containing each about a bushel of dried service berries some chechberry (chokecherry) cakes and about a bushel of roots of three different kinds..." Lewis described the three roots in great detail as the edible *Valeriana edulis* Nutt., the first bitterroot (*Lewisia rediviva* Pursh) seen by white men, and Nuttall sunflower (*Helianthus tuberosus* L.) which grows in the moist meadows of the Lemhi valley (Moulton, 1983).

Grass and grazing conditions in this land of bluebunch wheatgrass and Idaho fescue were given scant description. Lewis did mention sweetgrass (*Hierochloe odorata* (L.) Beauv.) growing abundantly along the Beaverhead River, and when the main expedition crossed Lemhi Pass, mention was made of there being "fine green grass" near a spring, while grass elsewhere was "perfectly dry and parched with the sun." Grass would be less taken for granted on the snowy eastward trip the next spring.

Ever eager to find Jefferson's hypothesized water route to the Pacific, Clark led a reconnaissance party down the

Salmon River approximately 13 miles from present-day Hwy. 93 into the rugged canyons of what we now call the River of No Return. The Shoshones had told the captains the Salmon was a hopeless venture, but Clark had to see for himself. What he saw in the tumultuous rapids, narrow canyons and overhanging cliffs put the finishing touch on his president's dream of an easy water route to the Western Sea.

Before departing northward to what is now Lost Trail Pass, Clark noted several fires in the valley. These were set by the Indians, but not for ecological reasons. Rather, they were signal fires, set to inform the scattered bands that it was time to gather for the move toward the Missouri River and the land of buffalo.

There were 31 men, one woman and a baby in that first American exploring party. With only 29 horses, most of the party walked out of present-day Idaho just as they had arrived—on foot. To this day, no one knows exactly where they crossed into Montana near Lost Trail Pass, but we do know the weather was miserable and the going was slow and painful. Then, after trading for better horses with friendly Salish Indians (Flatheads) and increasing their stock to just over 40, the party enjoyed a relatively idyllic trip through the Bitterroot Valley.

The expedition turned west at Traveler's Rest south of present-day Missoula and crossed back into Idaho near Lolo Pass. At the gently-rounded top of that pass were glades..."open & boggy, water Clare and Sandey," an area remaining that way today and purchased from Plum Creek Timber Company in 1998 for historic protection by



Sinque Hole, shown here muddied by moose and elk, is a site on the Clearwater National Forest that was mentioned in the Lewis and Clark journals.

the State of Idaho. The next 100 miles across faint Indian trails, now known collectively as the Lolo Trail, were among the most difficult encountered on the entire expedition. Snow added to the miseries of steep, rugged terrain and no game for food. Clark, the veteran frontier soldier, complained, "I have been wet and as cold in every part as I ever was in my life." To make it through, the party ate horses, candles, bears oil and a forerunner of freeze-dried soup that Lewis had bought in Philadelphia. Still, the men took the time to note "8 different kinds of pine."

On September 20, Clark and an advance party descended out of the forest and jubilantly entered the Weippe Prairie—a "butifull," "leavel pine Country." He noted immense quantities of "quawmash," or camas (*Camassia quamash* (Pursh) Greene), a key food in the diet of the Nez Perce whom he soon met. Meanwhile, Lewis and the main party trailed behind, struggling through land that today remains so wild and remote that it is a candidate for wilderness status. Still, he noted changes in vegetation as the expedition dropped from mountain crest to Hungry Creek, including the appearance of three new species added to the store of scientific knowledge: an alder (*Alnus sinuata* (Regel) Rydb.), a honeysuckle (*Lonicera ciliosa* (Pursh) DC.) and a huckleberry, (*Vaccinium membranaceum* (Dougl. ex Hook) (Cutright, 1969).



A dogtooth violet blooms at the retreating edge of snow on the Idaho segment of the Lolo Trail.



Showy beargrass is a common plant along much of the Lolo Trail that extends from near Lolo, Montana, to Idaho's Weippe Prairie.

The Eastbound Journey

When the expedition members returned to Idaho the following spring, they waited on the banks of the Clearwater River near present-day Kamiah for nearly a month for the deep snow to melt so they could re-cross the Bitterroot Mountains. The site, now called Long Camp, had excellent pasture for the horses and was initially thought to be close to good hunting and sources of salmon. Instead, it turned out to be one more trial of trying to obtain food, particularly with trading goods reduced to needles, empty vials and other odds and ends. Clark aided the effort by playing doctor to the Indians, sometimes seeing as many as 40 or 50 patients in a day. Lewis used the time to describe new species of birds such as the western tanager, Clark's nutcracker and Lewis' woodpecker. He also studied bear skins, correctly distinguishing the difference between grizzlies and the various color phases of the black bear. It was also a time for botanizing. Cutright (1969) noted that one fourth (close to 50 in all) of the herbarium specimens collected on the expedition that survive today, were collected and described in great detail during this encampment in Idaho.

In one of the rare acknowledgments of Sacagawea's contributions to the expedition, the captains mention that in preparation for the mountain crossing, "our indian woman" laid in a store of fennel roots, or *year-pah* in her Shoshone language (Gairdner's yampah, *Perideridia gairdneri* (H. & A.) Mathias).



The rugged drainage of Hungry Creek on the Clearwater National Forest. This area was the scene of the expedition's only retreat when deep snow blocked the trail. It remains in wilderness-like condition today, one of the few such places on the entire route of the expedition.

Disregarding the warnings of their Nez Perce friends, and anxious to cross what Lewis called "that icy barrier which separates us from my friends and country..." the party set out too soon. Lewis continued to botanize as they went, even rhapsodizing about the beauty of the Wierpe Prairie and its blooming camas that struck him as "lakes of fine clear water, so complete is this desolation that on first sight I could have sworn it was water." He described tall trees and understory shrubs near the fringes of the prairie, including "apples" of wild roses that he said were triple the size of the ordinary species.

As the party progressed through the slippery mud, more and more snow was encountered. Lewis noted with alarm how much the vegetation was "proportionably backward; the dogtooth violet is just in bloom, the honeysuckle, huckleberry and a small species of white maple are beginning to put forth their leaves; these appearances in this comparatively low region augers but unfavourably with respect to the practicability of passing the mountains..."

The false start came to an end on June 17, 1806, somewhere on the mountainside above Hungry Creek in what is now the Clearwater National Forest. Snow up to 15-feet deep made it "madness in this stage of the expedition to proceed..." and resulted in the only "retrograde march" of the entire expedition.

The expedition was well mounted at this point. Thanks to trading and gifts from the Nez Perce, the party had two horses per man plus "several supernumary horses in case of accident or the want of provisions..." They even had stores of extra food in their baggage, and the crusted snow was able to support the weight of the horses. In short, the men were well prepared and some travel conditions held promise for a successful passage over the Lolo Trail. However, there were two problems that could not be ignored or minimized. One was finding the trail that would take them safely through the confusing jumble of peaks and canyons of the Bitterroot Mountains. The other was finding grass for their horses. So serious were these problems that



Grassy meadows free of snow in the spring were the key to the route selected by early Nez Perce who crossed the Bitterroot Mountains on what is now called the Lolo Trail. The Indians served as essential guides for Lewis and Clark on the eastward crossing when snow covered most of the route.

the men actually considered a contingency plan that would have taken them several hundred miles south to the Snake River plains they had learned about from the Shoshones and across to the headwaters of the Madison and Gallatin Rivers.

Instead, the captains wisely sought Indian guides to help them in their second attempt to cross the snowy mountains. On June 24 they set out again. This time they were accompanied by five young Nez Perce, some of whom were en-route east anyway to see friends among tribes on the other side, while the others were interested in the guns promised as a reward for their services. And their services proved invaluable. Not only did they know the route with only intermittent traces of trail or rubbed trees to show the way, they knew exactly how far it was between meadows that would be free of snow and full of grass for the horses. To reach these places, such as our modern-day Bald Mountain, they chastised the men to hurry so it could be reached before dark. Later, at what we call 13-mile camp, they stopped early in the day, knowing it was the last good camp site before the long stretch to the east edge of the mountains.

Lewis never stopped botanizing. He described spring beauty (*Claytonia lanceolata* Pursh), unknown to science but collected for eating by the plant-wise Sacagawea. He likened its taste to Jerusalem artichoke. Not even the lowly whortleberry (*Vaccinium scoparium* Leiberg) and smooth woodrush (*Luzula hitchcockii* Hamet-Ahti) escaped his notice.

The mountain crossing ended on June 29. Leaving Idaho was perhaps the happiest day of the entire two-and-a-half-year journey. "When we descended from this ridge we bid adieu to the snow," wrote Lewis. The men, and presumably Sacagawea, spent the evening luxuriating in the dammed up waters of Lolo Hot Springs. The next day they traveled on, "leaving those tremendous mountains behind us—in passing of which we have experienced Cold and hunger of which I shall ever remember," wrote Clark.



Lewis and Clark trail expert Dr. Steve Russell points out a "peeled tree." Clark wrote in his journal about seeing pines near Lolo Pass that had been peeled in this manner by the Indians for use of the inner bark as food in the spring.

New Challenges Today

Lewis and Clark left behind a legacy of exploration and scientific discovery that has intrigued generations of Americans. As the bicentennial of that expedition approaches, there is renewed interest in every aspect of the undertaking, including its contributions to our knowledge of plants and animals of the West. Nowhere can modern explorers experience the sense of adventure and discovery as they can along the route of the expedition that passes through Idaho. Fueled by the best-selling book by Stephen Ambrose, *Undaunted Courage*, and the popular film by Ken Burns, the level of tourism attracted to the wild places of Idaho could be phenomenal.

In 1978, Congress designated the explorers' route as The Lewis and Clark National Historic Trail. The route passes through land managed by the Bureau of Land Management in the Salmon area, the Salmon-Challis and Bitterroot National Forests in the area of Lost Trail Pass, and the Clearwater National Forest west of Lolo Pass. Significant sections of the trail also pass through private ranch land on the eastern side of Idaho, industrial forest land near Lolo Pass, and a mixture of ownerships elsewhere. Interpreting the route to visitors while maintaining pristine vestiges and preserving the historic environment for future generations is sure to be a challenge to modern land managers every bit as daunting in its own way as traveling the route was to the first representatives of government. Meeting the modern challenge will also require all the sagacity, patience and perseverance that was part of the original expedition.

Sources

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The author is Professor of Resource Recreation and Tourism in the College of Forestry, Wildlife and Range Sciences at the University of Idaho. He is also past president of The Lewis and Clark Trail Heritage Foundation and currently serves on the Idaho governor's Lewis and Clark Trail Committee and the National Lewis and Clark Bicentennial Council.

Notes: All quotations of Lewis and Clark are from The Journals of the Lewis & Clark Expedition as edited by Gary E. Moulton and cited above. The set contains 12 volumes.

An excellent leaflet showing the entire trail route is available from the National Park Service. Area maps are available from the BLM and Salmon-Challis National Forest offices in Salmon, Idaho, and the Clearwater National Forest Supervisor's Office in Orofino, Idaho.

