

THE OFFICIAL PUBLICATION OF THE LEWIS & CLARK TRAIL HERITAGE FOUNDATION, INC. VOL. 12, NO. 2 MAY 1986

Lewis and Clark On The Lower Columbia



Courtesy Amon Carter Museum, Fort Worth, Texas

In 1905, Charles Marion Russell, (1864-1926) the famous Montana artist, who produced so many paintings descriptive of Montana and the west, created this watercolor depicting an incident involving the Lewis and Clark Expedition at a locale in the estuary of the Columbia River. Some historians and local individuals have indicated that the scene is in the vicinity

of Gray's Bay on the Washington shore of the river, an area visited by the exploring party as they descended the river in 1805. Others, and possibly rightly so, place the incident in March of 1806, soon after the Expedition had departed from their Fort Clatsop winter establishment and had begun their return journey. Prior to (continued on page 3)

THE LEWIS AND CLARK TRAIL HERITAGE FOUNDATION, INC.

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ABOUT THE FOUNDATION

The purpose of the Lewis and Clark Trail Heritage Foundation, Inc., is to stimulate nationally; public interest in matters relating to the Lewis and Clark Expedition; the contributions to American history made by the expedition members; and events of time and place concerning and following the expedition which are of historical import to our nation. The Foundation recognizes the value of tourist-oriented programs, and supports activities which enhance the enjoyment and understanding of the Lewis and Clark storv. The scope of the activities of the Foundation are broad and diverse, and include involvement in pursuits which, in the judgment of the Directors are, of historical worth or contemporary social values, and commensurate with the heritage of Lewis and Clark. The activities of the National Foundation are intended to compliment and supplement those of state and local Lewis and Clark interest groups. The Foundation may appropriately recognize and honor individuals or groups for: art works of distinction; achievement in the broad field of Lewis and Clark historical research, writing; or deeds which promote the general purpose and scope of activities of the Foundation. Membership in the organization comprises a broad spectrum of Lewis and Clark enthusiasts including Federal, State, and local government officials, historians, scholars, and others of wide ranging Lewis and Clark interests. Officers of the Foundation are elected from the membership. The Annual Meeting of the Foundation is traditionally held during August, the birth month of both Meriwether Lewis and William Clark. The meeting place is rotated among the States, and tours generally are arranged to visit sites in the area of the Annual Meeting which have historic association with the Lewis and Clark Expedition.

WE PROCEEDED ON

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E.G. CHUINARD, M.D., FOUNDER

We Proceeded On is the official publication of the Lewis and Clark Trail Heritage Foundation, Inc. The publication's name is derived from the phrase which appears repeatedly in the collective journals of the famous Expedition.

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President Wang's Message

On March 29, I received a reminder from WPO Editor, Robert E. Lange, telling me that a "President's Message" for the May issue is due in early April. It hardly seems possible that two months have elapsed since I mailed copy for the previous issue to Bob. Yet, I know how quickly time speeds up especially when one seems in need of more than is available. Bob mentioned to me several specialinterest articles which you also will enjoy as you read through this issue. In my prerogative as President and on behalf of all of you I should like to salute Bob for all that he does to make WPO such an interesting and useful quarterly. I must ask how many of us truly are aware of the tremendous contribution made to the Foundation by WPO and by Bob to WPO?

While exercising my presidential prerogatives, I should like to say also that Ruth, Bob's better half, does an exceedingly fine job as Membership Secretary of the Foundation. Time and again during my tenure as your president, I have witnessed with admiration and appreciation the care and nurture with which Ruth fulfills the Membership Secretary responsibilities. Ruth is ever on the alert for ways and means to salvage an otherwise lost member and to obtain an additional person who can be added to Foundation membership. What a debt of gratitude so many of us owe to both Bob and Ruth Lange. When the opportunity arises, will you join me in telling the Langes that we know and we care about all they do for the Foundation?

Last week, I spoke with Malcolm Buffum, Annual Meeting Chairman, about my plans for a probable meeting with him and his principal co-workers in early May. The last thing needed by that committee or its chairman is prodding. My purpose in wanting to meet with them is to catch some of the contagion from what they are doing in their valiant effort to make the Foundation's 18th Annual Meeting one of the best ever conducted.

Irving W. Anderson, Foundation Past President, advised me recently that Charles H. Odegaard has accepted an invitation to be the banquet speaker at the Foundation's 18th Annual Meeting. Mr. Odegaard is the Regional Director of the National Park Service, Midwest Region. We are indebted to Andy for his effort and success in securing that commitment from Mr. Odegaard. (See also, page 5, this issue of WPO).

John E. Foote, First Vice President and President Elect of the Foundation recently mailed to 1985-86 committee chairpersons a questionnaire concerning Foundation committee plans for the 1986-87 year. That forward-looking step on John's part serves several purposes not the least of which is a reminder that the 1985-86 Foundation Committee year is two-thirds spent. May I respectfully ask chairpersons and committee members alike to continue to pursue with strong resolve their objectives

for this 1985-86 year. By the time this issue is in print, committee chairpersons will have been asked to have their committee reports completed and ready for duplication by June 1, 1986. Foundation members who are not a part of one of its committees are always welcomed and indeed encouraged to make known their ideas and suggestions for improvements.

L. Edwin Wang, President



News Notes

River Tour Ownership Change

Fort Benton, Montana: We Proceeded On has been advised that the Upper Missouri Wilderness Waterway Cruise Co., a previous corporation of sixteen shareholders (including Foundation Past President Gail Stensland and Foundation member John Lepley) has been sold to Larry and Bonnie Cook. Previously shareholders in the corporation, the Cooks are now the owners of the enterprise and have changed the name to Lewis and Clark Tours. For additional information members may write

(continued on page 4)

(About the Cover illustration — continued from page 1)

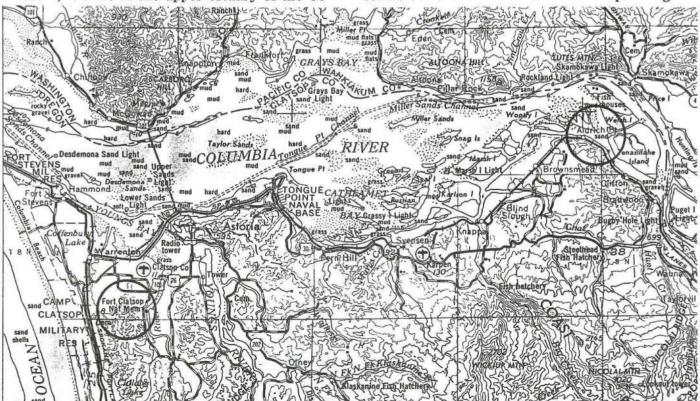
their leaving Fort Clatsop, the journals detail (Thwaites, IV; 178-179) that Drouillard (Drewyer) "purchased" an Indian canoe by trading "Captain Lewis's uniform laced coat and nearly half a carrot of tobacco".

Russell studied the Expedition's journals, and in this painting, depicted members of the party in a canoe typical of the decorated canoes (carved bows and sterns) used by the Indians. The canoes in which the party were traveling the previous year (1805) were canoes without such decor, constructed by members of the exploring party. Therefore, we may assume that Russell's watercolor relates to the canoe involved with Drouillard's trade, and the 1806 return journey. The locale very likely can be placed along the present-day Oregon shore in the vicinity of the several (the Expedition's "Seal") islands in the upper estuary of the Co-

lumbia, perhaps near the lower end of the large island identified on today's maps as Tenasillahe Island (Coues, III:907, Fn. 7; Thwaites, IV:200).

Captain Clark (identified by his red hair) stands near the bow of the vessel with Sacagawea gesturing in sign language with the Indians in the approaching canoe party. York, Clark's manservant, is seated near the center of the vessel.

The exploits of Lewis and Clark and the Expedition had a special fascination for Russell, and students and enthusiasts of the exploring enterprise are familiar with his many paintings illustrating events described in the Expedition's journals. The original of the watercolor reproduced on the cover measures 18½ x 23½ inches. Russell's signature, his familiar bison skull identification, and the date, "1905", are discernible in the lower left corner of the painting.



NEWS NOTES - continued

Lewis and Clark Tours, P.O. Box 762, Fort Benton, MT 59442.

Like the previous company and the other Fort Benton operation known as *Missouri River Outfitters* operated by Foundation member Bob Singer, a variety of one half day to five day Missouri River trips will be available through the primitive and scenic ("White Cliffs") 160 mile segment of the river in north-central Montana.

Montana Committee Meets

The Montana Lewis and Clark Expedition Centennial Coordinating Committee, chaired by Foundation member Marshall Johnson, met in Great Falls, May 8, 1986. The committee consists of ten individuals who have volunteered to work up a master schedule of events which will highlight Lewis and Clark Trail activities during Montana's 1989 Centennial Celebration. In 1805 and in 1806, on both the outbound and the return journey, the exploring enterprise spent over six months (April 29 - September 13, 1805, and June 29 - August 7, 1806) in what is now presentday Montana. As they traveled, they established 286 night encampments. Many of these campsites have been located and preserved along with other important locations documented in the explorers' journals. Because of this committee's activity and promotion, centennial year (1989) travelers through the nation's "Treasure State" will be apprised of the route, activities, and accomplishments of the Lewis and Clark adventure

Accolade for Betts' York Book

Robert B. Betts' recent book In Search of York: The Slave Who Went to the Pacific with Lewis and Clark, Colorado Associated University Press, Boulder, Colorado, has been cited by Choice magazine, a publication devoted to reviewing books for college, university, and public libraries. The Colorado Associated University Press has advised We Proceeded On that Choice magazine is published by The Association of College and Research Libraries and is described as a "prestigious" and recognized reviewer of books that should be included on libraries' shelves. The York book has been included in a register of several "Outstanding Academic Books of 1985-1986" and

will be so listed and reviewed in a special May 1986 brochure to be distributed at the American Library Association's Annual Conference in New York in June, and at an international librarians' conference in Tokyo, Japan in August.

Excerpts from the *Choice* magazine citation read:

At last there is a first-class study of the only black member of the Lewis and Clark Expedition, William Clark's slave York. Previous accounts portrayed York as a racial stereotype, a comic character who clowned and womanized his way to the Pacific without making any significant contribution to the expedition ... Betts corrects these fallacies and myths . . . The result is a balanced account that illustrates York's genuine contributions without exaggerating his character or his role. In the process, Betts also exposes the impact of racial prejudice on historical interpretation and gives us a model of sound historical in-

Foundation member Bob Betts' book about York was reviewed in the November (Vol. 11, No. 4) issue of We Proceeded On. At the 17th Annual Meeting last August in St. Louis, Betts was awarded the Foundation's highest honor, the "Award of Meritorious Achievement" for his fine contribution to the literature about the Expedition. Foundation members extend congratulations to Bob for this important and recently added accolade.

Willard Descendants' Reunion

Descendants of Expedition member Alexander Willard congregated in August 1985 for ceremonies at Willard's gravesite in Franklin, Sacramento County, California. The reunion involved descendants from as far away as the eastern United States and Canada. In We Proceeded On, Vol. 6, No. 2, pp. 20-21, Foundation member Wilbur Hoffman, Yuba City, California, provided an interesting monograph and illustrations about the gravesite of Alexander Hamilton Willard.

Following his return from the Lewis and Clark Expedition, Willard married in 1807, worked as a black-smith, served in the army in the War of 1812, and farmed in Wisconsin. In 1852, and at the age of 74, he and his wife and family of four sons, five daughters, and some of their families, traveled by oxdrawn wagons to settle on a ranch near present-day Franklin, California. He died, at age 87, in 1865. Only the Expedition's Sergeant

Patrick Gass who died, at age 99, in 1870 outlived him. Other members of the Willard families are buried in the cemetery near Franklin. Foundation member David Kennedy, Weimar, California, supplied WPO with a news item about the family reunion and graveside ceremonies that appeared in the Sacramento Bee newspaper "Magazine Section" for March 9, 1986.



National Park Service Provides Certification For L. & C. NHT Sites

Thomas L. Gilbert, Regional Coordinator, Lewis and Clark National Historic Trail, National Park Service, MidWest Region, Omaha, Nebraska, has advised We Proceeded On of two locales that have recently been certified as Lewis and Clark National Historic Trail Sites.

A letter to Mr. Douglas K. Eiken, Director, North Dakota Parks and Recreation Department, advised that North Dakota's application was approved to designate the state's Lewis and Clark State Park (near Williston) a Lewis and Clark National Historic Trail Site.

A similar letter directed to Mr. Mark E. Lindberg, City Manager, City of Cannon Beach, Oregon, advised that the city's Les Shirley Park (near the place where William Clark's party visited the whale stranded on the beach in January 1806) had received certification as a Lewis and Clark National Historic Trail Site.

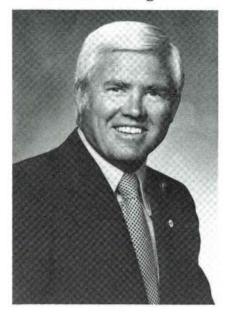
NPS Regional Trail Coordinator Gilbert's letter expressed appreciation for the participants' cooperation in this worthwhile project, and pointed out that the legislation which established the *Lewis and Clark National Historic Trail* requires that the sites be developed and managed through a Federal-State-local-private partnership with the National Park Service providing overall administration and coordination.

Appropriate trail markers for installation at the sites accompanied Gilbert's letters.

Communities, civic bodies, organizations, or agencies desiring information about the National Trails System Act (Public Law 90-543) should make inquiry to Thomas Gilbert, Regional Coordinator, National Trails System, NPS Midwest Region, 1709 Jackson Street, Omaha, NE 68102.

Annual Banquet Speaker

Charles H. Odegaard



By Irving W. Anderson¹

As devotees of Lewis and Clark Expedition history, Foundation members delight in reminiscing the glories of deeds and events long past. Our Annual Banquet speaker this year, however, will focus upon blending those glories of the past into opportunities for personal, fulfilling Lewis and Clark "living history" experiences, both for the present and the future. And he will as well, point up means for extending our interests beyond the Foundation, to include a broad spectrum of the general public.

Charles H. Odegaard is well qualified to address these two dimensions for promoting enjoyment of America's great legacy of Lewis and Clark history. Indeed, Mr. Odegaard is a veteran administrator with thirtyfive years of experience in parks and recreation management. His current position is that of Regional Administrator, Mid-West Region, U.S. National Park Service, Omaha, Nebraska. His responsibilities include overseeing administration of the 4,500 mile long Lewis and Clark National Historic Trail, including both the outbound and return routes from Wood River, Illinois, to the Pacific

A native of Beloit, Wisconsin, Mr. Odegaard received his B.S. Degree from the University of Wisconsin at LaCrosse in 1952. He pursued graduate studies at the University of Wisconsin in 1957, and at

 Chairman 18th Annual Banquet Speaker Committee; Foundation Secretary (1974-1979); Foundation President (1980-1981). versity of Washington from 1961 to 1963.

Mr. Odegaard has served as a member and officer of numerous park and recreation related organizations. He was president of American Youth Hostels from 1982 to 1984; president of the National Association of State Park Directors from 1973 to 1975; and president of the National Society for Park Resources from 1974 to 1976. He is co-author of Park Management, published in 1983 by the John Wiley Company, New York. He has also published several articles about recreation, parks and leisure in a variety of professional journals.

Before joining the National Park Service as Deputy Director of the Pacific Northwest Region in 1979, Mr. Odegaard, from 1963 to 1979, was Director of the Washington State Parks and Recreation Commission, an agency that administers 170 park sites. While in the latter position he was a driving force in the establishment of the Lewis and Clark Interpretive Center at Fort Canby State Park, near Ilwaco, Washington. From 1964 to 1969 Mr. Odegaard was the Washington State representative on the Congressional Lewis and Clark Trail Commission. Upon statutory termination of the Commission, he became a pioneering member of its citizen successor, the Lewis and Clark Trail Heritage Foundation, Inc., serving as its Secretary in 1972.

Of specific interest to our membership will be a discussion by Mr. Odegaard of emerging cooperative Foundation/NPS projects of national scope. Priorities among these include: Formulation of a memorandum of understanding between the Foundation and NPS, which would outline policies and programs governing public use and enjoyment of the Lewis and Clark National Historic Trail; a status report on the Foundation/NPS cooperative effort to develop and publish a brochure, including a map and informative text of the entire route of the Expedition; joint Foundation/NPS development of specialized audio-visual materials, both for classroom use, and by historical, environmental or travel groups interested in studying Lewis and Clark history, traveling the Trail, or preserving and interpreting sites, landmarks, etc. Mr. Odegaard's remarks will be augmented with slides showing numerous sites that have been formally "certified" by both public and private groups in accordance with the comprehensive management plan for the Trail.

In the context of the mission of our Foundation to preserve and perpetuate the integrity of Lewis and Clark history, we are indeed favored to have Mr. Odegaard as our Annual Banquet speaker. As we pursue substantive goals for Foundation activities, it is truly fitting that it become widely apparent that our volunteerism is fully supported and reinforced by our Federal partner, the U.S. National Park Service.

Updating Lewis & Clark In Recent Periodicals

"Some Medical Aspects of the Lewis and Clark Expedition", is the title of a monograph published in North Dakota History — Journal of the Northern Plains, Vol. 53, No. 1, Winter 1986. Cindy Fent, the author, received her MA in American History from Fort Hays State University, Hays, Kansas. She presently teaches high school in that city. Mrs. Fent is a graduate nurse trained at the University of Kansas School of Nursing. Her husband is a medical doctor and they have two daughters. The present article was developed in a graduate seminar at Fort Hays State University. Relying heavily on the several dissertations previously written on this subject, and especially Foundation Past President Eldon "Frenchy" Chuinard's full length volume Only One Man Died: the Medical Aspects of the Lewis and Clark, Expedition, the article provides a commendable exposition about Lewis and Clark's medical organization and activities. Collectors of literature about the Expedition may order a copy of this issue (described ante) from the State Historical Society of North Dakota, Bismarck, ND 58505. Enclose remittance in the amount of \$4.00 to cover cost of the publication (\$3.00), postage and handling.



Editor's Note:

We would like to include in each issue of WPO, news items detailing current or forthcoming activities related to the Lewis and Clark Expedition in each of the eleven trail states, or for that matter, any activity anywhere that would be of interest to members and readers. To accomplish this, we must rely on our Directors, their designated reporters, and other Lewis and Clark enthusiasts, to provide us with this information. We would be pleased to hear from you.

"...it thundered and Lightened" The Weather Observations of Lewis and Clark

By Arlen J. Large¹

"The Mountains to the East Covered with Snow. we met with a great misfortune, in having our last Th[er]mometer broken by accident..."

Clark's journal entry for September 3, 1805

[The Party was on their "Fish Creek" (the North Fork of the Salmon River) in east-central Idaho.]

In late May 1805, it was warm in what is today the state of Montana. Afternoon temperatures were in the 80s, and at night one blanket was enough. To the Easterners of the Lewis and Clark Expedition, the air also felt remarkably dry. Captain Meriwether Lewis noticed cracks and shrinkage in his wooden sextant case, and he had trouble keeping his brass inkwell filled. Well, how dry? What was the rate of evaporation?

"I found by several experiments that a table spoon full of water exposed to the air in a saucer would avaporate in 36 hours," wrote Lewis in his journal for May 30.

The saucer became an impromptu hygrometer, an instrument for measuring humidity. There were many well-known ways of watching changes in the air's water vapor content; a ball of wool that grew heavier in moist air had done the trick 300 years before for Leonardo da Vinci, no less. In the early 19th century calibrated hygrometers were coming into use, but they probably were too delicate to bang around in a Missouri River canoe. Lewis' saucer could only tell him that water disappeared pretty fast into the pure, dry atmosphere of Montana's high plains, but not as fast as it did the previous September 23 in South Dakota, when Captain William Clark noted that two spoonsful "aveporated" during the same saucer-time of 36 hours.

1. Editor's note: Arlen J. Large, Jim, as his friends and fellow Foundation members know him, has just recently retired after 30 years as a staff correspondent for the Washington, D.C. Bureau of the Wall Street Journal. A past president (1983-1984) of the Foundation, Jim has been a frequent contributor to the pages of We Proceeded On. A frequent traveler of the Lewis and Clark Trail, together with his Wall Street Journal reporting assignments, and his hobbies (astronomy and archaeology and other natural sciences) have taken him to all fifty states and all seven continents (see WPO, Vol. 9, No. 4, p. 3)

Now Lewis and Clark were Army explorers, not experts in meteorology, a science that had barely begun and isn't far advanced even today. Yet President Jefferson naturally was curious about weather conditions in the newly acquired expanse of Louisiana, and weather observations were on the long list of assignments for his exploring team. Among "objects worthy of notice" on the trip, Jefferson instructed Lewis, would be:

"Climate, as characterised by the thermometer, by the proportion of rainy, cloudy, & clear days, by lightning, hail, snow, ice, by the access and recess of frost, by the winds prevailing at different seasons, the dates at which particular plants put forth or lose their flower, or leaf, times of appearance of particular birds, reptiles or insects."

The captains obeyed. The account of their travels is crammed with fresh climatological data, including the first systematic day-by-day record of an entire deep-freeze winter in North Dakota. While some of the temperature readings during that winter of 1804-05 may have been questionable, it would be nice to think that the government had folded those early results into its statistical averages for the area's "normal" climate. Alas, this was not done.

Just one kind of formal measuring instrument — the thermometer — accompanied Jefferson's weather scouts. The hot-cold scale worked out by Holland's Daniel Gabriel Fahrenheit in 1724 (with its 100-degree mark, for "hot," pegged just above human body temperature) was in widespread use in North America. Lewis and Clark carried no barometer, though portable versions using atmospheric pressure to measure mountain heights were then available.² It would have been just one more fragile gadget to bother with, and

anyway, the explorers set out expecting not much more than a hump between the Missouri and Columbia headwaters. As Jefferson's instructions suggested, state-of-the-art weather observing was still pretty much at the Farmers Almanac level, consisting mainly of keeping your eyes open.

For travelers living under the sky. keeping a weather-eye peeled was as natural as a winter shiver. Daily routine on the march could be quickly altered by the weather's whims. Heading up the lower Missouri on a 96-degree June day "the men becom verry feeble," wrote Clark, and had to take a three-hour breather on the bank. Weather influenced major strategy decisions as well. On arrival at the mouth of the Columbia in November, 1805, the party was torn between moving back upriver to a drier wintering place, or staying on the coast to endure the constant rain and the local price-gouging Indians. But the captains noticed that those Indians went around almost naked, a sign that the leather-clad explorers wouldn't have to bundle up against another cold winter, and that helped tilt the decision to stay. And cloudy weather defeated Lewis's hope of getting an observation of the sun to determine his position while scouting the Marias River country in July, 1806. After waiting three days he gave up and bid "a lasting adieu to this place which I now call camp disappointment."

Interestingly, such mere barebones operational reports on the weather came more often from Lewis, supposedly the more introspective of the captains. It was Clark who seemed more emotionally moved by the weather's changing moods, and who often

See W. E. K. Middleton, Invention of the Meteorological Instruments, Johns Hopkins Press (Baltimore, 1969), and The History of the Barometer, Johns Hopkins Press (Baltimore, 1964).

opened a new day's journal entry with a weather comment intended to set the scene.

"A cloudy rainy disagreeable morning," began Clark's account of a tough day descending some rapids on the Columbia. In fact, weather somehow brought Clark about as close to expressive writing as he ever got. From his field notes at the Camp Dubois jumpoff point in Illinois: "all the after part of the Day the wind so high that the View up the Missourie appeared Dredfull, as the wind blew off the Sand with fury as to Almost darken that part of the atmespear

this added to agutation of the water apd truly gloomy." Near Council Bluffs: "after the wind it was clear sereen and cool all night." "Flying clouds all day," was an image frequently evoked in his journal. And "A fair Sun shineery morning" told you that January 14, 1804, would be an upbeat day at Camp Dubois.

3. Clark seemed fascinated by the behavior of clouds. Reporting an impending storm on the Yellowstone, he wrote: "the cloud app^d to hang to the S W, wind blew hard from different points from 5 to 8 P M which time it thundered and Lightened." Thwaites, Vol. 6, p. 225. Both captains tried to generalize from day-to-day evidence and, as good men of the enlightenment, draw conclusions where they could. On the ascent of the Missouri as it reached the plains, Clark alertly noted the absence of something: "I have observed that Thunder and lightning is not as common in this Countrey as it is in the atlantic States." At the confluence of the Columbia and the Snake, Clark correctly saw a weather clue in the fact that the roofs of the Indian lodges were almost flat, "which proves to me

(continued on page 8)

A Segment reproduced from Lewis' Weather Diary for December 1804

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There are ten columns of information (reading from the left) as follows:

Column 1, heading reads: "1804 Days of the Month". The figures in the column under the sub-heading of the month of "Dec" indicate the days of the month, "6" through "18". (This is only a segment of the table for the entire month of December 1804.)

Column 2, heading reads: "Therm t [thermometer] at \bigcirc [a symbol for the sun]rise" The figures are in degrees Fahrenheit. A letter "a' or "b" following the digit(s) indicates above or below zero.

Column 3, heading reads: "Weather", the letter symbol "s" indicates snow; "f" indicates fair; "c" indicates cloudy; c.a.s. indicates cloudy after snow. Other symbols used in this column, but not shown here are: "r" to indicate rain; "h" to indicate hail; and c.a.r.s. to indicate cloudy after rain and snow.

Column 4, heading reads: "Wind" at \bigcirc [a symbol for the sun] rise. In the column designation "NW" is for northwest; ; "E" is for east; "SE" is for southeast; "W" is for west.

Column 5, heading reads: "Ther'mt at 4 P.M." Figures in the column are in degrees fahrenheit. A letter "a" or "b" following the digit(s) indicates above or below zero.

Column 6, heading reads: "Weather" and is similar in detail to column 3, except that the state of the weather is as observed at 4PM

Column 7, heading reads: "Wind at 4 P.M." In the column "NW" is for northwest; "N" is for north; "SE" is for southeast, etc.

Column 8, 9, and 10, reports the "river raise and fall", with the letter "r" indicating rise and the letter "f" indicating fall. In columns 9 and 10 the change in the river is designated in feet and inches. It should be noted that on several of the days no change in the river is detailed.

The balance of the space in the table, to the right of the columns, provided space for "Remarks and notes of reference".

that rains are not common in this open Countrey." At one point the journal of Private (later Sergeant) Patrick Gass noted "a quantity of fallen timber" on the right, or Iowa, bank of the Missouri. But Clark reasoned harder, seeing "apparently the ravages of a Dreddful harican" that had jumped the river the year before. Hurricanes of course are ocean storms, so the deductive captain had the modern name wrong. But the expedition was crossing what's now known as Tornado Alley, and a twister quite possibly was the cause of those snapped-off tree trunks.

The explorers were quite faithful in keeping for the President a record of biological evidence of the changing seasons - though it perhaps had less meaning for a latitudehopping party on the move than for a stationary country gentleman at Monticello. The weather diaries reported the times when cherry trees bloomed, elks shed their antlers and bull buffalos competed for the cows. Perhaps the most charming entry of this kind was a sign of spring reported by Lewis in Idaho in May, 1806: "the dove is cooing which is the signal as the indians inform us of the approach of the salmon."

Geese and swans were flying southward in October, 1804, as the expedition moved up the Missouri to meet the approaching winter; cottonwood leaves were falling fast and flannel shirts had been issued to the men. Frost was in the air in November as the party built its winter fort near the Mandan villages, a fixed spot for watching the seasons for the next five months. On November 13, Clark carefully reported the onset of ice running in the river, an important fact for explorers seeking a water route to the Pacific. By month's end the Missouri was frozen hard enough for people to walk on.

December 1 saw the thermometer hit 1 degree below zero, the coldest day of the season so far. That was the sunrise reading. Every afternoon somebody always checked the thermometer again at 4 o'clock, and both captains wrote down the day's readings in their tabular weather diaries. During the previous winter at Camp Dubois Lewis had tested the calibration of one of the party's thermometers by dipping it in slush to match the mercury's level against "the friezing point, and boiling water for the point marked boiling water." He decided that the mercury stood 8

degrees too low compared to those marks on the instrument. Lewis therefore began his diary by making a plus-8 degree correction in his written temperatures, but Clark just put down the raw readings. By wintertime at Fort Mandan, however, the captains were both recording the same temperatures, mostly, either because they agreed that uniformity was better or, more likely, because they had switched to another thermometer. Either way, it wasn't a reassuring display of the accuracy of their instruments.

Moreover, some of those recorded temperatures are suspiciously inconsistent with what people were saying elsewhere in their journals. For November 11 the temperature tables show the mercury rising abruptly to a balmy 60 degrees in the afternoon. Yet Clark said it was "a cold Day" in his journal for that date, and Sergeant John Ordway thought it was "chilly this evening."

At any rate, that was a bitterly cold winter in North Dakota, with moonlight sometimes making strange refraction patterns through ice crystals in the air. One freezing day in January Lewis had to use "sperits" instead of water for a reflective surface needed for his sextant reading of the sun. The winter's coldest recorded day was December 17, 1804, when Clark made a sunrise entry of 45 below zero in his tabular weather diary and in his journal, commenting that it was a "verry Cold morning." That date's low also caught the eye of Jefferson. However, the President used Lewis's slightly different reading in reporting the captain's progress to a scientific crony in France: "He wintered in Lat. 47 degrees 20' and found the maximum of cold 43 degrees below the zero of Fahrenheit."

4. Thwaites, Vol. 6, p. 166, p. 170 note 2. An 1803 list found at the Army Quartermaster Depot in Philadelphia showed that Lewis ordered three thermometers for the expedition. Though there's no record of how many he actually took, it was more than one, because Clark on September 3, 1805, reported the accidental breakage of "our last" thermometer. In his Letters of the Lewis and Clark Expedition, with Related Documents, Editor Donald Jackson dismissed as "not likely" the persistent story that Antoine Saugrain, a St. Louis doctor, made the instruments by scraping mercury from the back of a household mirror. Vol. 1, p. 75, note 1.

5. Thwaites, Vol. 7, p. 327. Jefferson's February 11, 1806, letter to Constantin F. V. Volney reflected his examination of documents received in Washington from Fort Mandan in July, 1805.

The suspicious wobbling of digits recorded in the tabular diaries, taken from one or more thermometers of questionable calibration, makes it risky to use the Fort Mandan temperature readings for a precise measurement of exactly how cold it was that winter. Yet nobody else was at that particular place with a thermometer that early in history, and during the entire winter the expedition's amateur weathermen didn't miss one day of a sunrise and afternoon temperature check.

So for what it's worth, those readings averaged 4 degrees above zero for December, 3.4 degrees below zero for January and 11.3 degrees above zero for February. That produced an average for the winter of 4 degrees above zero.⁶

Was that "normal?" According to the National Climatic Data Center in Asheville, N.C., it was not until 1935 that the government decided to define "normal" as a temperature average covering a previous period of 30 years. The current period of normals against which today's temperatures are compared is 1951-1980. For Bismark, the station closest to Fort Mandan, the normal temperatures for December, January and February average 12.3 degrees above zero.7 So despite all the obvious difficulties of comparison, including the possibility of a long-term climatic change, one may say that the Lewis and Clark winter of 1804-1805 in North Dakota was decidedly colder than "normal" as it's reckoned today.

The Fort Mandan temperatures, along with all the expedition's weather diaries, were published in 1814 as an appendix to Nicholas Biddle's authorized narrative of the trip. Biddle left out the bulk of scientific data available to him in the manuscript journals, but perhaps he included the rather tedious record of temperature, wind and sky conditions because Lewis had promised a weather diary in an 1807 post-expedition prospectus of his planned account of the tour. The weather, at least, was an integral part of the expedition's early published history.

- 6. Computed from photocopy reproductions of temperature tables in Clark's Codex C and Lewis's book of thermometrical observations, furnished by the American Philosophical Society in Philadelphia. There are numerous transcribing or printing errors in the tables appearing in the several editions of Thwaites.
- 7. National Weather Service data reproduced in *The 1986 World Almanac and Book of Facts*, Newspaper Enterprise Association, Inc. (New York, 1985), p. 758.

Unique as they were, however, it doesn't appear that the weather records of those early years have been incorporated into the government's climatological data base. Not until 13 years after the expedition's return did the government start trying to collect weather observations in a nationally systematic way. The Army Surgeon General told doctors at every military post to keep a weather diary, "as the influence of weather and climate upon diseases, especially epidemic, is perfectly well known ..."8 Thus temperature records from some U.S. military posts are available from 1819, but observations from North Dakota in the microfilmed climatic archives in Asheville go back only to 1874.9

With buds on the willows, Lewis and Clark left Fort Mandan in April, 1805, and the moving party's weather once again became a function of changes in latitude and elevation, as well as season. Approaching Montana's Beaverhead Mountains in mid-August the men were surprised at the upland chill. " we lay last night with 2 blankets or Robes over us & lay cold," wrote Private Joseph Whitehouse. On September 3, climbing toward Lost Trail Pass in the Bitterroots, Clark reported that "we met with a great misfortune, in haveing our last Thermometer broken, by accident," when the instrument's case bumped a tree.

Now began some virtuoso improvising for ways to measure temperature without a thermometer. "the loss of my thermometer I most sincerely regret," wrote Lewis at Fort Clatsop on a mild day in early January, 1806. "I am confident that the climate here is much warmer than in the same parallel of latitude on the Atlantic Ocean, tho' how many degrees is now out of my power to deter-mine."

But he could guess. Not two weeks later, Lewis was "satisfied that the mercury would stand at 55 a. o." Then, during a cold snap, the sight of his breath indoors led him to

"suspect" a thermometer would show just 20 degrees above. Two inches of water in a vessel experimentally placed outside froze solid, but the next night rated "not so could" with a reading of just 3/8ths of an inch of ice. And the number of blankets needed by a sleeper continued to be a rough measure of temperature. "have slept comfortably for several nights under one blankett only," reported Lewis in June, 1806, encamped in Idaho. But deeper into the summer Clark complained he "slept cold under 2 blankets" at the head of the Bitterroot Valley in Montana.

No thermometer was needed for the captains' twice-daily report on the "aspect of the weather," recording sky conditions and precipitation. The entries were simple abbreviations: "c" for cloudy, "f" for fair, "r" for rain, and the like. On the buffalo plains one letter often sufficed, but Fort Clatsop's mixed-up weather sometimes produced an alphabetical shower. For example, this was the "aspect"

entered for the afternoon of March 7. 1806: "r.a.f.r.h.c.&f," which decoded, meant rain after fair, rain, hail, cloudy and fair. Lewis added an exasperated remark for that date: "Sudden changes & frequent, during the day, scarcly any two hours of the same discription."

Faithfully, almost stubbornly, the explorers checked the sky conditions and wind direction each day after leaving Fort Clatsop, no matter what else was going on. The practical value of these records to anyone may be questioned; Elliott Coues called the tabular entries "useless," and said he included them in his 1893 edition of the Biddle narrative only to fulfill a pledge not to leave anything out.10 Perhaps the observations stand best as a symbol of the captains' fidelity to duty, come what may.

On July 27, 1806, for example, Lewis had quite a lot to do besides (continued on page 10)

10. Elliott Coues, Editor. The History of the Lewis and Clark Expedition, Francis P. Harper (New York, 1893), Vol. 3, p. 1282.

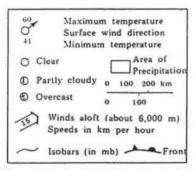
1973

75

60

LOW

NOVEMBER 15.



"The most disagreeable time I have experenced," wrote William Clark on November 15, 1805, as the expedition was pinned by storms on the north bank of the Columbia River estuary. The endless winter rain of the northwest Pacific coast gave the Lewis and Clark expedition its biggest weather shock of the whole trip. The editors of the Atlas of Oregon, published by University of Oregon Books (Eugene, 1976),

HIGH

picked this weather map for November 15, 1973, to show how a "typical rainy winter day" at the coast is generated by a low pressure system over the Pacific. A front pushed by strong winds aloft (shown by the fat arrows) dumps the ocean's moisture onto the western side of the Coastal and Cascade mountain ranges.

In fact, that was the pattern experienced by the expedition's weather observers during the winter of 1805-06 at Fort Clatsop. After filling his January, 1806, weather diary with such entries as "rained incessently all night," and "rained very hard last night," and — miraculously —" the sun shown about 2 h. in the fore noon," Meriwether Lewis ventured this generalization: "The Winds from the Land brings us could and clear weather while those obliquely along either coast or off the Ocean bring us warm damp cloudy and rainy weather.'

Patrick Gass totted up this soggy statistic for the Fort Clatsop winter: "From the 4th of November 1805 to the 25th of March 1806, there were not more than twelve days in which it did not rain, and of these but six were clear."

By mid-April, 1806, the eastbound party had recrossed the moisture-catching mountains and immediately noticed a difference. "even at this place which is merely on the border of the plains of Columbia," wrote Lewis, "the climate seems to have changed the air feels dryer and more pure."

^{8.} Quoted by Charles Smart, The Connection of the Army Medical Department with the Development of Meteorology in the United States, Weather Bulletin 11, p. 209.

^{9.} Inventory of Sources of Long Term Climatic Data in Microfilm and Publication Form, National Climatic Center (Asheville, N.C., 1982), p. 61. Since the start of official observations in 1874, the temperature at the National Weather Service station at Bismark twice hit a record low of 45 below zero on January 13, 1916 and on February 16, 1936, equaling Clark's low for December 17, 1804.

study the sky. That's the day he was startled awake on Two Medicine River in Montana by the bloody knife-and-gun struggle with his Blackfeet camp companions, followed by a marathon horseback gallop to safety. Yet he found time then, or on recollection later, to note that the sky was fair and that the wind shifted from northwest to southwest between dawn and late afternoon. That might not have been "worthy of notice" under the circumstances, but it was something for both Jefferson and posterity to admire.

Back-Issues of WPO

Back-issues of We Proceeded On are available for purchase. Some early issues are paper plate photo-offset reproductions of the original publications and the quality of the illustrations are slightly depreciated. Present-day printing and mailing costs require that back-issues be supplied at \$2.00 each to Foundation members, and at \$2.50 each to nonmembers. You may request a copy of a "WPO Feature Story Prospectus", which lists the titles, etc., of feature stories that have appeared in We Proceeded On and in WPO Supplementary Publications. A recapitulation of book reviews that have been published in We Proceeded On is also included in this prospectus.

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A NEW SUPPLEMENTARY PUBLICATION; WPO PUBLICATION NO. 2A

Call Him a Good Old Dog, But Don't Call Him Scannon

By Donald Jackson

Attractively reprinted from the August 1985 issue of We Proceeded On, this Supplementary Publication features historian Donald Jackson's investigation relating to the name of the Expedition's Newfoundland dog "Scannon". While researching geographical names associated with the Lewis and Clark Expedition, Jackson's "detective" work discovered that a beautiful stream in west-central Montana was documented by the journalists, and on one of Clark's sketch maps, as "Seamans Creek", and was probably named after the dog. Donald Jackson's monograph (which includes reproductions of the journalist's handwriting, maps, and illustrations of present-day Monture Creek) provides evidence that earlier historians misinterpreted the Captains' and Sergeant Ordway's journal handwriting and applied the nomenclature "Scannon" for the dog.

This is a companion publication to WPO, Publication No. 2, published in 1977, and titled "Our Dog Scannon — Partner in Discovery", by historian Ernest S. Osgood. Lewis and Clark enthusiasts will want this new supplementary publication, and if they do not already have the Osgood publication, will welcome this opportunity to acquire both publications at the special two-publication price noted here:

WPO, Pub. No. 2 and No. 2A (both reprints) \$2.50

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(Relates to Feature Story on Facing Page)

Editor's note: Foundation member W. Raymond Wood is Professor of Anthropology, University of Missouri-Columbia. He received his B.A., and M.A. degrees in anthropology from the University of Nebraska (1949-1956). His Ph.D. in the same science was earned at the University of Oregon (1958-1961). Ray Wood has had an exceptionally active career in his chosen field with important field studies for the Smithsonian Institution; staff archaeologist for the State Historical Society of North Dakota; Curator of Anthropology, University Museum, University of Arkansas; and distinguished teaching activity at the University of Nebraska, University of Colorado, University of Wyoming, and the University of Missouri-Columbia.

In addition to serving as editor for several archaeological and anthropological periodicals, Wood is the author of nearly 20 publications written during the period 1960-1982. Beginning in 1952 and continuing to the present time, he has contributed over 50 articles which have appeared in newsletters, journals, and proceedings.

Dr. Wood has been a contributor to We Proceeded On. (See his "John Thomas Evans and William Clark: Two Early Western Explorers' Maps Re-Examined: (WPO, Vol. 9, No. 1) and "Lewis and Clark in the Missouri State Capitol" (WPO, Vol. 101, No. 1). At the Foundation's 1980, 14th Annual Meeting, Omaha, Nebraska, Ray Wood presented an interesting paper titled: "Lewis and Clark's Manuscript Maps by Benjamin O'Fallon". He was one of sixteen speakers in April 1983, at the Center for the Great Plains Studies, University of Nebraska-Lincoln. The theme for the Center's Seventh Annual Symposium was: "Mapping the North American Plains." Ray Wood's article beginning on the facing page will be of particular interest to Foundation members who have traveled the Trail on the Missouri River in north-central Montana.

Slaughter River: Pishkun¹ or Float Bison?

By W. Raymond Wood²

William Clark made two contemporary maps showing this area... On the draft map an ambiguous symbol, directly north of the mouth of the unlabled "Slaughter River" (just downstream from the symbol for their camp of May 29, 1805) appears to refer to the decaying bison by the label "Buffalow massacree". (See Figure 1, the finished version of Clark's map.)

Perhaps the best known entry in the Lewis and Clark journals relating to Indian bison hunting practices is a passage written by Meriwether Lewis on May 29, 1805. Lewis was led to make his observations following the discovery of a mass of decomposing bison at the foot of a high cliff near the juncture of modern Arrow Creek with the Missouri River, in what is now Chouteau County, north central Montana. Although four other members of the expedition³ also noted these rotting remains, Lewis's description is the most detailed of them:

today we passed on the Stard. side the remains of a vast many mangled carcases of Buffalow which had been driven over a precipice of 120 feet by the Indians and perished; the water appeared to have washed away a part of this immence pile of slaughter and still their remained the fragments of at least a hundred carcases they created a most horrid stench.⁴

Following these comments, Lewis penned a succinct description of the means by which the Indians of the region "distroy vast herds of buffaloe at a stroke" by driving them to their death over a steep cliff. Lewis and Clark's identification of these "hundred carcases" as the remains of such a bison drive prompted them to name the stream entering the Missouri on the opposing bank "Slaughter River."

William Clark made two contemporary maps showing this area. One of them was a preliminary draft map, and the other was a more

- 1. Webster's Third International Dictionary, Unabridged defines: "Piskun [Blackfoot] a steep cliff sometimes with a corral or enclosure at the bottom that is used by American Indians for driving large numbers of buffalo to their slaughter." As in this monograph there are alternate spellings.
- 2. See boxed feature on facing page.
- 3. Reuben Gold Thwaites, ed., Original Journals of the Lewis and Clark Expedition. New York: Dodd and Mead & Co., 1904-05, Vol. II, p. 95; Vol VII, p. 91; Patrick Gass, Journal of the Voyages and Travels of a Corps of Discovery. Minneapolis: Ross & Haines, Inc., 1958, p. 110; Milo M. Quaife, ed., The Journals of Captain Meriwether Lewis and Sergeant John Ordway. Madison: State Historical Society of Wisconsin, Madison, 1916, p. 221.
- 4. Thwaites, Original Journals, Vol. II, p. 93.

finished version,5 On the draft map an ambiguous symbol, directly north of the mouth of the unlabeled "Slaughter River" (just downstream from the symbol for their camp of May 29, 1805) appears to refer to the decaying bison by the label, "Buffalow masacree". The finished version of the map (Fig. 1) names "Slaughter River" and carries the longer legend, "Great nos. of buffalow Kill by falling over a steep rock," but bears no symbol for the location of the unfortunate animals - only the site for the camp of May 29. A small sketch of a quadruped (apparently not a bison) appears just below the legend; readers are free to judge the identitv of this beast for themselves. The general locale of the dead bison is therefore well documented, but the exact spot where they were seen cannot be convincingly identified on the ground today since the mouth of Arrow Creek, as well as the channel of the Missouri River, has changed since Lewis and Clark's time.

In each of the five journals the authors specify that the remains were the result of Indian action without, however, revealing how this identification was made. Lewis and Clark had seen only abandoned Indian encampments along this part of the Missouri valley, so there were no local Indians to provide this information. Most later writers have assumed that the bison had been destroyed by the Indians whose camps the expedition had seen earlier that day near the mouth of Judith River.6 Lewis estimated the camp had been abandoned 12 to 15 days.7

It is in fact possible that they had learned how such drives were conducted from either Native American informants or from Canadian traders while they wintered near the Mandan and Hidatsa Indians at Fort Mandan. None of the expedition members are known to have witnessed this means of hunt-

- Gary E. Moulton, Atlas of the Lewis & Clark Expedition. Lincoln: University of Nebraska Press, 1983: maps 41, 52.
- For example, Roy E. Appleman, Lewis and Clark. Washington, D.C.: National Park Service, 1975, p. 302.
- 7. Thwaites, Original Journals, Vol. II, p. 92.

ing, for it is a technique not mentioned earlier in the journals. Toussaint Charbonneau, who had previosuly lived with the Hidatsa for five to seven years, was of course with the expedition at Arrow Creek.

Charbonneau, as well as Sacagawea, had surely seen or heard of this means of killing bison, as it was a common practice among Indian tribes on the northern Plains. One may therefore suspect that the details of such hunts were either obtained from Charbonneau or Sacagawea at the time the animals were seen by the expedition, or from informants living further downriver.

Modern historical and archaeological studies have documented that one of the basic prerequisites for a successful bison drive is to discover, or to maneuver, a large group of bison into such a position that they may be stampeded over a precipice. The requisite high bluffs are indeed prominent features at the point where the expedition found the mass of decompsoing bison. However, the land immediately behind the bluff is a tangled maze of ravines and steep, broken ground which would neither have attracted large groups of bison to it for grazing, nor made it practical - had they actually been assembled there — for them to be concentrated for a successful jump. Those archaeologists I have consulted who are familiar with the locale, or who have inspected topographic maps and photographs of the setting, agree that the topography is inappropriate for a bison drive.8

It was the force of the stampeding animals from behind that forced the animals in front over the edge of the precipice, as Lewis's description accurately noted. The animals could not be induced to destroy themselves when they could actually see they were headed for destruction. In the Arrow Creek situa
(continued on page 12)

8. For an overview of bison drives, see Carling Malouf and Stuart Conner, eds., "Symposium on Buffalo Jumps." Montana Archeological Society, Memoir 1, pp. 1-2.

Dr. Mary Meagher, personal communication to A.M. Johnson, August 1985. tion they simply could not have been deceived, as the land pitches steeply toward the river above the cliff face. Furthermore, it would have been necessary to drive the bison nearly a mile across the dissected terrain, and down a slope that descended almost 900 feet before the animals reached the cliff face (Fig. 2).

The topographic setting of the locale resembles no other bison drive known on the northern Plains, and the situation at the scene would have made it impossible to drive bison to their death using any historically recorded Indian means of doing so. Members of the Lewis and Clark Trail Foundation who visited the Ulm Pishkun bison drive site on one of the field trips sponsored by the Foundation at the meeting in Great Falls, Montana in 1984 had the opportunity to visit a representative bison

jump site. 10 A comparison of the Ulm Pishkun setting with that at Arrow Creek illustrates the radical differences in the two settings and provides the reader with a basis for judging the plausibility of the Arrow Creek situation. The edge of the upland at the top of the bluffs above Arrow Creek would be a reasonable place to expect to find a jump, but not the cliffs at the river's edge (Fig. 3).

Stuart Connor of Billings, Montana (personal communication, December 1985) has inspected the locality and, some years ago, thought he detected a buffalo or cattle trail descending to the river on the downstream end of a ridge near the presumed locality of Lewis and Clark's bison accumula-

10. The Ulm Pishkun site is briefly described by Maynard Shumate, "The Archaeology of the Vicinity of Great Falls, Montana." Missoula, Montana: Anthropology and Sociology Papers, No. 2, pp. 4-6. tion. There are, in fact, several very steep cow trails down the bluffs along this part of the river by means of which cattle reach the river from the uplands. In these settings I have seen large groups of cattle trail one behind the other in single file down to the water's edge. Connor believes that the Indians may well have stampeded bison downhill, under similar circumstances, to produce the results that the Corps of Discovery noted in their journals.

Whatever the final verdict, although a few scraps of bone may be found at the base of the bluffs opposite Arrow Creek today, the remains of the bison described in the expedition's accounts appear to have eroded into the river, precluding any precise identification of the site's actual location on archaeological grounds. Roy Appleman believed the site was a mile and a quarter downstream from the mouth

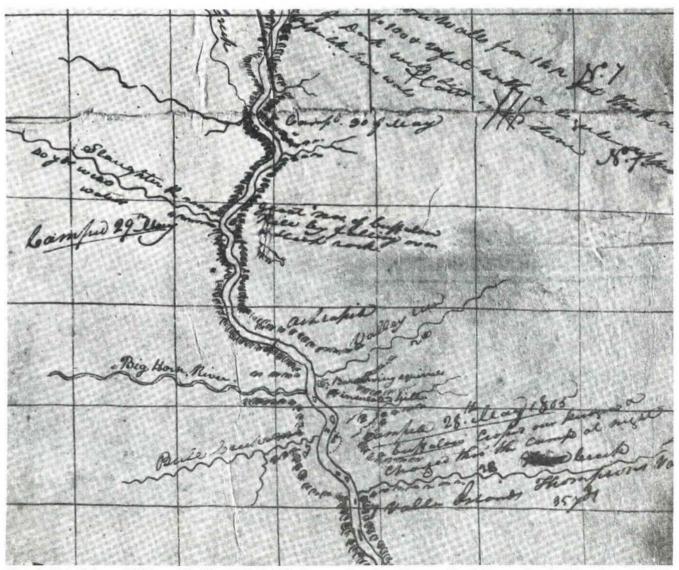


Fig. 1. Detail from William Clark's 1805 finished map showing the mouth of Arrow Creek (Thwaites 1904-05, VIII: Map 14, Part 3).

of Arrow Creek rather than nearly opposite the modern mouth of the stream. 11 The exact position on the locale, in any event, appears to be irrelevant, since the physical setting is much the same for some distance above and below the valley opposite Arrow Creek.

There is, however, a plausible alternative hypothesis to account for the bison remains noticed by the Corps of Discovery. There are numerous historic accounts of an annual spring parade of drowned. bloated bison floating down the major rivers on the Great Plains. This was a well known spectacle in the northern Plains, on the Missouri as well as on other streams of large size. In April 1801, for example, Alexander Henry the Younger commented that drowned bison were drifting past him down the Red River of the North "by entire herds."12 A few years earlier, on May 18, 1795, John Macdonell made an equally relevant observation on the Assiniboine River in present day southern Manitoba:

observing a good many Carcases of Buffuloes in the River & along its banks I was taken up the whole day with Counting of them & to my surprise found I had numbered when we put up at night 7360 Drown'd and mired along the River and in it. It is true in one or two places I went on shore & walked from one Carcase to the other where they lay from three to five miles deep.¹³

Many other accounts of such massive death scenes were written by early western explorers and traders. Great numbers of these animals drowned in efforts to cross the river on ice which, weakened by the spring thaw, had become too thin or weak to support them. To judge by the numbers of bison mentioned in various narratives, and taking into account the many large rivers in the Great Plains, it is perhaps no exaggeration to suggest that several hundred thousand bison may have perished annually following the spring breakup of river ice.

Numerous float bison were indeed recorded by the expedition in 1805 below Arrow Creek, drifting downstream in the current as well as lodged on the river banks. Some of them, Lewis noted, had been caught in the rapids above Great Falls, where the water swept "them over the cataracts where they are instantly crushed to death . . . in this manner I have seen ten or a douzen disappear in a few minutes." The expedition members

14. Thwaites, *Original Journals*, Vol. 1, pp. 302, 343, 345, 370; Vol. II, p. 38. Lewis's comments are in Vol. II, p. 167.

were, then familiar enough with the phenomenon to ask: Why did they identify these animals at "Slaughter River" as victims of Indian hunting? If any of the bison there displayed evidence of butchering or other signs of Indian exploitation, they did not mention it.

Given these circumstances, we suggest that the situation described (continued on page 14)

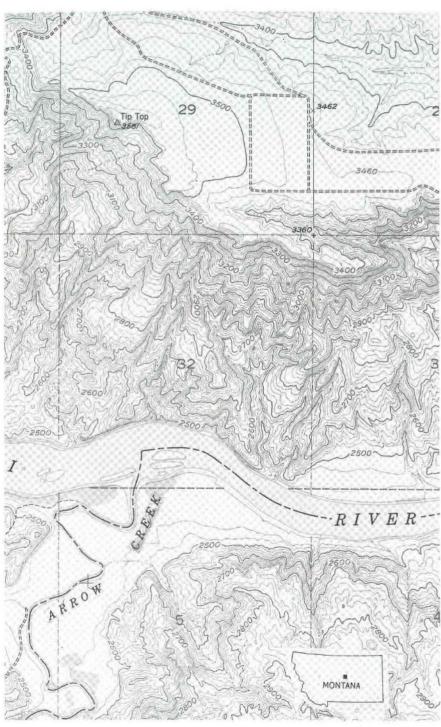


Fig. 2. Detail from the United States Geological Survey, 7.5 minute Starve Out Flat quadrangle, Montana, showing the modern setting of the mouth of Arrow Creek. The channel of the Missouri River and Arrow Creek are not what they were in 1805, but any changes in the upland terrain would not be significant on a map of this scale.

^{11.} Appleman, Lewis and Clark, p. 302.

^{12.} Elliott Coues, ed., The Manuscript Journals of Alexander Henry and of David Thompson, 1799-1814. Minneapolis: Ross and Haines, Inc., 1965, Vol. I, p. 174.

W. Raymond Wood, ed., "Journal of John Macdonell, 1793-1795." Appendix in: Daniel J. Provo, Fort Esperance in 1793-1795: A North West Company Provisioning Post. Lincoln: J & L Reprint Company, 1984, p. 136.



Fig. 3. The bluffs opposite the mouth of modern Arrow Creek. The view is northeast (photograph by the author, 1979).

by Lewis and Clark at Arrow Creek represents a mass of float bison that washed ashore during a surge of high water and accumulated on the river bank beneath the bluff. The physiographic and hydrological setting itself suggests this possibility. The high bluffs lie along the north side of a bend of the Missouri where the current would have carried their bodies near the bank.Simultaneously, the waters of Arrow Creek, flowing north into the Missouri's channel, would have forced the carcasses even nearer the shore - an ideal circumstance for depositing them at the base of the bluff. Many of them

were in fact at the water line, as Lewis's account specifies.¹⁵

In summary, a natural accumulation of drowned float bison was probably misinterpreted by the captains as having resulted from Indian activities. The presence of their remains in this natural but deceptive setting, we suggest, then prompted Meriwether Lewis to expound on the bison drive as a Native American hunting technique.

This paper elaborates on an earlier suggestion made in W. Raymond Wood, "Lewis and Clark and Middle Missouri Archaeology," Quarterly Review of Archaeology, Vol. 3, 1982, pp. 3-5.

Recent Meetings

The STATE OF WASHINGTON LEWIS AND CLARK TRAIL COMMITTEE held its quarterly meeting on April 4 and 5, 1986, at Walla Walla, Washington. Over 50 members and guests gathered at 5:30 P.M. (April 4) at the National Park Service's Whitman Mission National Historic Site (seven miles west of Walla Walla), for a reception with wine (from local wineries) and cheese tasting preceding an excellent buffet dinner served in the facility's auditorium by a local catering service. Following dinner there were remarks by the NPS Whitman Mission Superintendent Robert Amdor, who spoke about the Whitman Mission's Sesquicentennial (1836-1986). An interesting color slide presentation describing the NPS installation and the city of Walla Walla added

to the program. Committee member Viola Forrest made all of the arrangements for the committee's quarterly meeting. The evening's activities concluded with an invitation from Viola to visit her beautiful home in Walla Walla.

On Saturday, April 5, members and guests assembled at 9:30 A.M. at the Walla Walla Country Club for the business meeting of the committee. Committee Chairman Roy Craft, Stevenson, Washington, presided. Included were reports concerning Washington State's (1989) Statehood Centennial, and the committee's several planned activities to call attention to the Lewis and Clark Expedition's part in the exploration, history and heritage, and eventual 1889 statehood. Other subjects discussed during

the meeting included: a progress report by Chairman Craft concerning the Columbia Gorge Interpretive Center to be developed and constructed near the Army Engineer's Bonneville Dam at Stevenson, Washington; an updating by committee member Barbara Kubik concerning the proposed Palouse (the Expedition's "Drewyers") River hydroelectric project. Committee member Ken Heckard, Long Beach, Washington, provided details of the construction of a Lewis and Clark Memorial Park, in Long Beach, near where Captain Clark carved his named on a tree (no longer extant). The marker, consisting of stone artifacts from many places along the entire trail of the explorers, and an interpretive sign, will replace a previous, less pretentious, marker that had been removed. A feature at the site will be giant statues of Captains Lewis and Clark fabricated (wood carved) from cedar logs. Shortly after the Expedition arrived at the estuary of the Columbia River in November 1805, Clark and a party reconnoitered along the Pacific shore north from Cape Disappointment to the present location of the community of Long Beach, Washington. Committee members were pleased with Dick Clifton's (Washington State Parks & Recreation Commission) announcement that the Washington State Lewis and Clark brochure is to be reprinted, and will be included in the 18th Annual Meeting promotional packets to be distributed to national Foundation members. The meeting adjourned prior to luncheon which was served in the meeting room at the Country Club. Foundation (1984-1985) Past President Bill Sherman and WPO Editor Bob Lange, Portland, Oregon, were guests at the two day meeting and represented the national Foundation.

The February 1986 meeting minutes of the HEADWATERS CHAPTER OF THE LEWIS AND CLARK TRAIL HERITAGE FOUNDATION, Bozeman, Montana, reveal a variety of activities by this busy chapter. The minutes arrived just as the March issue of WPO was being printed. Twenty-eight members and guests attended the February 4, 1986 meeting at the Bozeman Community library.

Chapter President (and Foundation Director) Donald Nell presented the chapter with a new nylon, 15 star, 15 bar flag (a replica of

the flags carried by the Expedition in 1804-1806). The flag will be displayed, hereafter, at all chapter meetings, field trips, and special Lewis and Clark events. Jack Fellerhof, chairman of the committee on researching, authenticating, and mapping Clark's party return journey route, reported that his committee would be going to Butte to confer with Foundation member/cartographer Bob Bergantino. They will examine 1890 Geological Survey Maps in an attempt to locate the channel of the Yellowstone River in 1806. The committee promised Vice President John Foote, Billings, that they would endeavor to establish without question Clark's party "Camp Cottonwood"1 - the place where two canoes were constructed on July 20, 1806. Chapter member Dick Ellis is investigating the construction and cost of an interpretive sign for the Kelly Canyon location of Clark's party July 14, 1806, campsite.

The Headwaters Chapter and the Portage Route Chapter (Great Falls) have set a tentative date — July 12, 1986 — for a joint picnic. The event will have members of the two chapters meet at the Gates of the Mountain excursion boat landing (15 miles north of Helena). Following the boat trip through the scenic and historic Gates of the Mountains, the groups will proceed to Missouri Headwaters Park near the community of Three Forks for the picnic.

Chapter members have observed that the city of Bozeman does not have any streets named for the Expedition. It was pointed out that other Montana cities and communities have so honored the exploring party. The chapter will attempt to have Bozeman's North Seventh Avenue renamed "Lewis and Clark Parkway". Chapter President Nell has started such a campaign and has requested members to contact city councilmen, service clubs, and the Chamber of Commerce in behalf of this project.

President Nell also reported on the proposed development of "Clark's Lookout", the site near Dillon, Montana. He advised that the Montana Fish and Game Department has submitted a budget for further work at the site. Founda-

tion Secretary Edrie Vinson (Red Lodge), who is one of the initiators of the project, has pledged to assist the Headwaters Chapter toward renewing interest in the Dillon area. Nell has written a Mr. Davidson in Dillon, a local citizen, interested in the project.

Program for the evening included a 50-slide presentation by member Dr. Jack Taylor illustrating the plant life (flowers and grasses) gathered, preserved, and documented by members of the Expedition. A second feature was a two projector slide show descriptive of the Chapter's float trip on the upper Missouri River in the spring of 1985, presented by member Dr. Charles Kirkpatrick. Both programs were educational and excellently presented.

The chapter's nominating committee presented their recommendations for officers and directors for 1986. Don Nell was reelected president for a second term. Other officers are: John (Jack) Taylor, Vice President; Cheryl Farmer, Secretary, and Teddy Sanem, Treasurer. Elected to be Directors are: Dick Ellis, John Rogers, and Don Lee.

The souvenir handout for the evening meeting was a copy of President Thomas Jefferson's letter of credit given Meriwether Lewis. President Nell, in discussing this, referred to it as "The First Carte Blanch Credit Card". See: Donald Jackson (Editor), Letters of the Lewis and Clark, Expedition with Related Documents, 1783-1854, University of Illinois Press, Urbana, 1978. Vol. 1, pp. 105-106, Letter 67.

Called the METRO ST. LOUIS CHAPTER OF THE LEWIS & CLARK TRAIL HERITAGE FOUNDATION, a new chapter of the Foundation has been formed in the region in which the Expedition had its beginnings and its triumphant conclusions. The new entity is composed of persons living in the St. Louis and St. Charles areas of Missouri and the Wood River area of Illinois.

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The elected officers of the METRO ST. LOUIS CHAPTER are: Winifred C. George, President (St. Louis, MO); Rev. Wm. Barnaby Faherty, S.J., Vice President (St. Louis, MO): Lucille Rich, Secretary (Wood River, IL); and Darold W. Jackson, Treasurer (Clayton, MO).

Currently, twenty-seven members comprise this new chapter. Many of these individuals, along with invited guests, met on February 9, 1986, at the Jesuit Museum in Florissant, Missouri. Father Faherty, an author and a Professor Emeritus of History, St. Louis University, spoke on some of the relationships between William Clark and the priests who came to the region. He described the Indian School established by the Jesuits at Florissant at the urging of William Clark. Clark, a resident of St. Louis following the return of the Lewis and Clark Expedition, visited the school in 1824, the year it was established, and again in 1825.1 During these visits he encouraged the Jesuits to extend their work westward to the Indian villages on the border of presentday Kansas. Not long before his death in September 1838, Clark, who was Governor of the Missouri Territory, 1813-1820, and Superintendent of Indian Affairs until his death, provided Father DeSmet with a passport for his mission to the Potawatomi Indians at Council Bluffs (present-day Iowa), a landmark on the Lewis and Clark Trail.

The organization of this new Foundation chapter and the renewed interest in the Lewis and Clark saga in the region where the nation's westward expansion had its beginnings is gratifying. It should also be noted that the Charter (organizational) Meeting of the Foundation was held in St. Louis in 1970 following the expiration of the Congressional (1964-1969) Lewis and Clark Trail Commission.

1. William Clark's activities related to the Indian Schools in Florissant was the subject of an interesting interpretive talk by Ann Rogers during the Foundation's (1985) 17th Annual Meeting. Mrs. Rogers (St. Louis) is a member of the new chapter, and addressed annual meeting attendees when they visited the locale on one of the charter bus tours. See WPO, Vol. 11, No. 4, p. 18.

The OREGON LEWIS AND CLARK HERITAGE FOUNDA-TION held its first 1986 quarterly meeting April 12, in the Thomlinson Lecture Room, Aubrey Watzek Library, Lewis and Clark College, Portland. Seventeen members were present to hear member Erna Rose's paper related to the botanical specimens collected by the Expedition. Erna and her late husband Don Rose visited the Academy of Natural Sciences of Philadelphia, seven years ago, and photographed many of the Lewis and Clark Herbarium specimens. In addition to Erna's fine collection of

(continued on page 16)

^{1. &}quot;Camp Cottonwood" is not a name that originated with the Expedition. Elliott Coues proposed this nomenclature in his *History of the Expedition Under the Command of Lewis and Clark*, Francis P. Harper, N.Y., 1893. Reprinted Dover Publications. Vol. 3, pp. 1142-1144, footnote 33.

slides made at the Academy were slides in color of many of the same plants, growing in their natural habitat. Other presentations at the meeting included: a book review of the new Travel Guide Fielding's Lewis and Clark Trail reviewed by Oregon Foundation Vice President Dwight Garrison (reviewed on page 17, this issue of WPO); and a report by Oregon Foundation President Malcolm Buffum about the plans for the Foundation's 1986, 18th Annual Meeting to be held August 16-20 in Oregon. Buffum is also serving as Chairman for this year's annual meeting.

At the meeting, there was a "preview" showing of a "pilot copy a new videotape featuring the NPS Fort Clatsop National Memorial (near Astoria, Oregon). The videotape titled: "Exploration by Land: Lewis and Clark's Journey" is the first of a series of eight 12 to 15 minute videotapes related to Oregon history being produced for 4th and 5th grade classroom use by Oregon Public Broadcasting and the Oregon Historical Society. The project, funded by a special grant, will not be completed until later this year. Readers should note that this was a "preview" showing and the videotape is not available for distribution at the present time.

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WPO editor has received "Issue No. 1" of a new Newsletter published jointly by the IDAHO (GOVERNOR'S) LEWIS AND CLARK TRAIL COMMITTEE and the IDAHO CHAPTER OF THE LEWIS AND CLARK TRAIL HERITAGE FOUNDATION, INC. Edited by James R. Fazio (Moscow, Idaho), Chairman of the Governor's Committee and Ottis Peterson (Boise, Idaho), President of the Idaho Chapter, the publication will report on items of interest needing attention and direction by either or both of the organizations, and provide announcements of upcoming meetings.

The current issue reports on a development of great interest to both the Committee and the Chapter. It has been learned, from a preliminary report sent to the USDA Forest Service, that the Bonneville Power Administration (BPA) has plans for the construction of a high-voltage power line across the Clearwater National Forest following the ridges on which the Lolo Trail Corridor is located. The Newsletter comments: "Although we will not know for sure until BPA makes its plans open to the public, this appears to be a major threat to a significant national treasure. Our initial reaction is that the old excuse of 'we won't disturb the actual trail tread' will be offered — and that it must be met head on. An historic trail or trail route is as much a visual and inspirational experience as it is a physical piece of evidence of a past event. A considerable measure of reason has been exercised by the Idaho Lewis and Clark Trail Committee in not asking for untouched vistas or a stop of logging operations in the vicinity of the Lolo Trail Route [used by the Lewis and Clark Expedition in 1805 and 1806]. But a power line is going too

The new publication announces a joint meeting of the two organizations to be held on May 3, 1986 in Boise. There will be a meeting of the Governor's Committee at 11:00 A.M. preceding luncheon and the afternoon joint get together. The theme of the afternoon session is "Working for Historical Preservation", and Merle Wells, Idaho State Historian will give an overview of the Idaho Historical Society's mission, structure, programs, and achievements. There will be a panel discussion related to "Lewis and Clark Activities in Idaho" featuring a speaker from the Idaho Department of Parks and Recreation, remarks by Martin L. Peterson, member of the Idaho [1990] Centennial Commission, and presentations by Ottis Peterson and Dr. Fazio. Following the meeting there will be a tour of the Idaho Historical Museum. At the evening banquet, James Hammersten, M.D. (Boise), Vice President of the Idaho Chapter, will act as master of ceremonies and will introduce the evening's program - titled "Along the Lolo Trail - 180 Years After Lewis and Clark", presented by Barbara and Duane Opdahl. The Opdahls, Pierce, Idaho, operate historically-oriented tours along Idaho's Lolo Trail with emphasis to the Lewis and Clark Expedition (see WPO, Vol. 11, No. 4, pp. 28-29).

Mention should be made, here, that the Idaho organizations are planning to host the national Foundation's Annual Meeting in 1990, Idaho's Statehood Centennial year. It appears that Lewis and Clark interests are alive and vital in this scenic and historic Trail State.



We can report on several meetings held by the PORTAGE ROUTE CHAPTER of the Foundation. Great Falls, Montana. Thirty-five members were present for a meeting held on January 25, 1986. President Ella Mae Howard presided at the meeting and there were reports from several committees: Ben Rangel, membership committee chairman, reported that the chapter's membership had remained stable with sixty-one members; Norma Ashby reported that there had been some delay in completing the video cassette made during the 1984 reenactment of the Expedition's eighteen mile long 1805 portage around the Great Falls and the series of falls of the Missouri River. Norma reported that Joe Lawson, who is editing the video material made during the reenactment, is taking extra time to insure the quality of the production; Blanche Harding, a Montana puppeteer, reported on the progress of a marionette show she is developing concerning the Lewis and Clark Expedition. Harding announced that Dr. Harry Fritz, University of Montana, Missoula, will write the introduction to the show and has completed the editing of the script. The project has been incorporated as a nonprofit enterprise with interested Montanans serving on a Board of Directors, with Portage Route Chapter member Marshall Johnson as chairman. Fifteen marionettes will make up the cast for the production, and one of the marionettes - a Mandan Indian Chief - was displayed at the meeting; it was announced that the Boy Scouts of the area will make the theme for their 1986 activities the Lewis and Clark Expedition, and will look to the Chapter as a resource for related information; election of officers for 1986 was an event of the meeting and the slate of officers presented by the nominating committee were elected by a unanimous vote. Marshall Johnson, Great Falls, the newly elected president, spoke briefly about the past accomplishments of the chapter and presented an overview of projects for the coming year.

Fifteen members attended the February 24, 1986, meeting of the Foundation's PORTAGE ROUTE CHAPTER. Chapter President Marshall Johnson presided at the meeting. The following activities were discussed: the Chapter's participation in obtaining grants to support the Blanche Harding Lew-

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is and Clark puppet show; invitation for chapter members to join the Montana Audubon Society members for the Society's forthcoming field trip; an announcement concerning the Montana Lewis and Clark Statehood (1989) Centennial sub-Committee (a volunteer committee chaired by chapter President Marshall Johnson); conversation regarding a joint meeting with the Foundation's Headwaters Chapter tentatively planned for July 12, which will include a Gates of the Mountain trip and a picnic at Missouri Headwaters State Park, near the community of Three Forks: Past President Ella Mae Howard reported on an invitation from Chanler Biggs, BLM, Fort Benton, concerning the Chapter's participation in the dedication of the Visitors Center at Fort Benton; member Margaret Adams proposal for the development of place mats for use in local restaurants to direct tourists to the scenic overlooks along the Missouri River, and to direct attention to the Lewis and Clark Expedition's 1805-1806 activities in the Great Falls area. A special feature of the meeting was member Bob Doerk's review of Olin D. Wheeler's "Volume One" of The Trail of Lewis and Clark, 1804-1904. "Volume Two" of the Wheeler work will be the subject of a review at a forthcoming meeting.

On March 24, 1986, thirteen members of the PORTAGE ROUTE CHAPTER gathered for a monthly meeting. President Marshall Johnson discussed with those members in attendance the frequency of chapter meetings and the possibility of replacing monthly meetings with bi-monthly meetings or quarterly meetings. He suggested that the entire chapter membership be asked to consider and comment on this matter. The programming of occasional field trips was also discussed. Other matters on the March meeting agenda were:

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The appointment of Ella Mae Howard to prepare an information letter to be circulated to commercial airlines operating in and out of the Great Falls International Airport. The letter, in sufficient quantity to be distributed to passenger airline crews, would provide historical information related to the Lewis and Clark Expedition's activities in the Great Falls area. Foundation Past President Bill Sherman, Portland, Oregon, a frequent airline commuter to several Montana airports has commented that such information is omitted from the verbal information presented to passengers as approaches and landings are being made to the local airport.

There was a discussion regarding a proposal to develop, print and promote the distribution of an informative pamphlet containing a reprint of an unabridged segment of the Thwaites Journals. The segment would be the documentation of the Expedition's June-July 1805 portage experiences in the Great Falls area. This publication would have an appropriate introduction prepared by Foundation member Dr. Gary Moulton, Lincoln, Nebraska, who is presently editing the new edition of the Expedition's journals being published by the University of Nebraska Press. The pamphlet/publication would be made available to hotels, motels, service clubs, chamber of commerce, public information desks, and schools.

Bob Doerk reported on the field trip with the local Audubon Society to Sacagawea Springs. It was announced that the video of the 1985 Reenactment of the Lewis and Clark Portage would be ready for viewing at the April 28, 1986 chapter meeting.

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Nineteen Committee members met for a quarterly meeting of the OREGON [GOVERNOR'S] LEWIS AND CLARK TRAIL COMMIT-TEE on March 1, 1986. Announcement was made that Oregon Governor Atiyeh had recently appointed Kathleen A. McMillan, Cascade Locks, and Mayor Donald V. Eppenbach, Irrigon, to serve as members of the committee. With the resignation of James Goggin, Michael Bordeaux was asked by Chairman Chuinard to serve as treasurer for the committee. Other matters discussed at the meeting included:

Chairman Chuinard read from a letter he had written to Mr. Wayne Kosbau a producer for Portland station KOIN-TV. Kosbeau has indicated an interest in developing an hour long prime-time documentary relating to the Lewis and Clark Expedition. Committee members have been invited to make suggestions.

Dr. John O'Donovan, President and Harold B. Wilde, Vice President (both of Clatsop County) for the Lewis and Clark Historical Pageant Association, reported that the pageant is now scheduled to be an event in 1987. Several considerations precluded the pageant from being a 1986 summer activi-

ty. They reported that local difficulties are being carefully worked out for locating the pageant at Clatsop County's Cullaby Lake. There is fund raising activity and local enthusiasm, and Dr. Dennis Hagen, professor of music at George Fox College, Newberg, is still committed to producing the pageant.

Committee member Malcolm Buffum, who is the national Foundation's chairman for the Foundation's 18th Annual Meeting, reviewed plans for the August 16-20, 1986, event (see WPO, Vol. 12, No. 1, pp. 3-4).

There was a report from Chairman Chuinard and Michael Bordeaux on site choices for a Lewis and Clark Interpretive Center Building. Three other sites are being considered for the Center in addition to the committee's present preference for the Lewis and Clark State Park site near Troutdale.

Chairman Chuinard distributed a printed proposal outlining a projected life-sized, three character statue (Clark, York and an Indian) that would be erected on the University of Portland campus (Waud's Bluff), Portland.

A report of the Committee's activities as Oregon's Lead Agency with the NPS Lewis and Clark National Historic Trail, Midwest Region, Omaha. See story page 4, this issue of WPO. Applications for certifying L. & C. sites in Oregon, in accordance with the National Trails System Act are being submitted.

The next quarterly committee meeting is scheduled for June 7, 1986.



By Robert E. Lange¹

Fielding's Lewis and Clark Trail, by Gerald W. Olmstead. Fielding Travel Books, William Morrow & Co., Inc., New York, NY, 1986. Soft cover "Blue Guide" series. Illustrations, Maps, Bibliography, index, 305 Pages. \$12.95.

Over the years, world travelers have relied on and enjoyed Fielding Travel Books. Presently Fielding lists 19 books and four of these provide information for travelers in the United

1. Fifth Foundation president and editor of

States. The most recent addition to their collection is *Fielding's Lewis and Clark Trail*. There is strong current interest from those seeking out the route, sites and attractions along the Trail of Captains Lewis and Clark and their exploring enterprise. Therefore, it is not surprising that the publisher's market research indicated such a volume would have appeal.

Their excellent choice for an author/tour guide, Gerald W. Olmsted, makes this book the ultimate for modern trailblazers who set-out to follow in the footsteps of the explorers. It is a valuable guide for a traveler for a journey following the entire route from Illinois-Missouri to the Washington and Oregon Pacific shore, or for any segment of the Trail. This is not a hurried, superfluous, unplanned dissertation, but a well organized guide for the modern adventurer and history enthusiast.

Olmsted visited this reviewer well over a year ago seeking advice on books he should acquire and study, individuals he should seek out as he traveled the trail, and other information that would lend value to his finished product. Since that time, it is evident that he has literally traveled every segment of the explorers' route across the western North American Continent. In his "Author's Note" he remarks: "I hope this book will be read aloud — a passenger reading to the driver about

the things they are seeing along the way."

Olmsted's imaginative text coupled with pertinent excerpts from the 1814 Biddle, the 1893 Coues annotation of the Biddle narrative, the Thwaites' journals of Captains Lewis and Clark, and occasionally from others makes it easy for the traveler/reader to relive the history of the Expedition's contributions to our Nation's westward expansion. The publisher adds a well deserved statement on the cover that reads: "A Reliving History Guide". There are twelve excellent maps and thirteen illustrations. The final chapter titled "Practical Advice" is most appropriate.

The few omissions and minor discrepancies, probably the result of misinterpretation of some individual's statement during an interview, may be easily overlooked and probably be corrected. It is the practice of Fielding to update or correct their "Blue Guides" as necessary (their "Red Guides" are updated annually).

Gerald Olmsted earned an engineering degree from Stanford University, and was president of an electronics company that manufactures equipment for satellite earth stations. He is now a full time writer living in Berkeley, California. He has other titles in the Fielding Travel Books.

Lewis and Clark students and en-

thusiasts who have already traveled the Trail will enjoy Olmsted's review of what they saw, and perhaps it will point out a site or attraction they missed. For someone planning to follow the explorers' footsteps for the first time, it will be indispensable, as are all Fielding Travel Books.

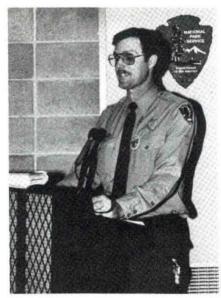
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Foundation Gift Memberships

If you have someone on your gift list who is interested in American history and the contribution of the Lewis and Clark Expedition to our nation's westward expansion, a membership in the Foundation, which includes the quarterly issues of We Proceeded On, would be an appreciated gift.

The Foundation has an attractive gift membership card which will list you as the sponsor of a membership. Send your gift membership fee together with the name of the gift recipient and the occasion (friendship, birthday, graduation, or holiday) you wish to honor to the Membership secretary whose address appears on page two.

At the State of Washington Committee Meeting — Walla Walla





(Left) Superintendent Robert Amdor, National Park Service Whitman Mission National Historic Site, addressed State of Washington Lewis and Clark Trail Committee members and guests. His remarks and color slide program concerning the Whitman Mission (observing its Sesquicentennial this year) and the Walla Walla region, followed a Friday, April 4 evening of examining exhibits, tasting delicious wines and cheeses from the region, and dinner in the interpretive center's auditorium. (Right) One of the tables, and part of the gathering, at the luncheon that followed the Saturday morning business meeting of the committee at the Walla Walla Country Club. (See the account of the meeting in the "Recent Meetings" column, this issue of WPO.)

The Mystery of the Third Corn Mill

By John H. Stofiel¹

In a listing of articles purchased by the Purveyor (Israel Whelan) for the Expedition under the heading or classification of "Indian Presents" are two Corn Mills. These are described as weighing 52¾ pounds and having a cost of \$20.00 (it may be assumed that the weight and cost was for the acquisition of the two items).²

In a similar listing under the heading of "Camp Equipage" is a single Corn Mill which is described as weighing 20 pounds and having an acquisition cost of \$9.00.3

Therefore, if the exploring party set out from their "Camp Wood" (present-day Illinois) with three "Corn Mills" we may wonder at what was the use and disposition of these three devices.

A search of the several extant journals provides this information:

Captain Clark in his journal entry for October 29, 1804, records a meeting and conversation with an Arikara Indian Chief *Ar-ke-tar-na-shar* and this detail involving one of the corn mills.

a Iron and Steel Corn Mill which we gave to the Mandins was verry thankfully received.4

Reuben Thwaites, in his edition of the Expedition's journals, provides a footnote which he credits to the Manuscript Journals of Alexander Henry and of David Thompson (3 Volumes edited by Elliott Coues, Francis. P. Harper, N.Y. 1895). Thwaites quotes Henry as follows:

I saw [1806] the remains of an excellent large corn mill, which the foolish fellows had demolished to barb their arrows the largest piece of it, which they could not break or work up into a weapon, was fixed to a wooden handle, and used to pound marrow-bones to make grease.⁵

Henry's "foolish fellows" were obviously the Mandan Indians, and Captain Clark's estimation of the thankfulness of the "Mandins" was erroneous, for it would appear that this particular corn mill never processed corn, but met its fate as described by Henry.

Reuben Thwaites also edited the Expedition's Private Joseph Whitehouse Journal, and provides evidence that on June 11, 1805, a corn mill was cached with other items near the confluence of the Marias and Missouri Rivers. Whitehouse's journal reads:

a clear pleasant morning, about 8 oClock Capt. Lewis, George Drewyer, G. Gibson, Jo Fields & Silas Goodrich Set out for the South Snowey mountain [this party's route followed the south waterway — [the decision having been made that the stream flowing from the southwest was the Missouri and not the Marias]. we put in the carsh or hole a keg of powder[,] 1 bar led, 1 keg pork[,] 2 kegs parched meal[,] the bellows & tools[,] augur[,]

plains[,] Saw &c. some tin cups[,] a dutch oven, a corn hand mill, packs of beaver, bear Skins[,] horns[,] Buffalow Robes &c &c...we got in readiness to ascend the South fork.

The above journal documentations account for the disposition of two of the three corn mills. The Mandan Indians to whom they gave the first corn mill were now far behind their present location where Whitehouse's journal details the caching of a second corn mill. Since the journals reveal no further information or references to corn mills, we are forced to make suppositions on the fate of the third.

One, had they made a gift of the third mill to the Indians before departing the Mandans?

Two, we know that they left the Mandans with great quantities of corn that the blacksmiths' had traded for their fabricating talents. They surely would have wanted a corn mill for at least as long as this corn supply lasted. The journals do not document their corn supply's depletion.

Three, not knowing of the availability of corn from Indians they would encounter further to the west, we might assume that they (in spite of the weight of the item, about 20 to 26 pounds), might have elected to carry the mill all the way to the Pacific coast. At least, if corn was not available, the device, since it was made of metal, had trade possibilities.

Perhaps, like other mysteries that students of the great exploring enterprise encounter, the fate of the third corn mill will never be known, and, then again, the near impossible could happen with the discovery of a corn mill of the Expedition's vintage at some location along the Lewis and Clark Trail.

- 1. Foundation member John Stofiel, Vernonia, Oregon, is a past president (1978) of the Oregon Lewis and Clark Heritage Foundation. He has also served the organization as Secretary-Treasurer. John is a long-time student and enthusiast of the Lewis and Clark Expedition and for the years 1976 to 1979 was the Editor/Compiler of the Oregon Foundation's quarterly publication Historical Anecdotes. For several years John has been the Director/Curator/Custodian of the Columbia County (Oregon) Historical Society Museum, Vernonia, Oregon.
- 2. Reuben G. Thwaites, Ed., Original Journals of the Lewis and Clark Expedition, Dodd, Mead, & Co., N.Y., 1904-1905. Reprint editions: Antiquarian Press, N.Y., 1959; Arno Press, N.Y., 1969. Vol. 7, p 238.

Donald Jackson, Ed., Leters of the Lewis and Clark Expedition, with Related Documents 1783-1854, First Edition, one volume, 1962. Second Edition (with new material), two volumes, 1978, Univ. of Illinois Press, Urbana. Page 94.

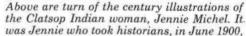
- 3. Ibid, Thwaites, Volume 7, Page 239; Jackson, Page 95.
- 4. Thwaites, op. cit, Volume 1, Page 211.
- 5. Ibid., Volume 1, Page 211, Fn. 1.
- 6. Ibid., Volume 7, Pages 98-99.

MARK YOUR CALENDAR — RESERVE THE DATES — AUGUST 16 - 20, 1986

FOR THE FOUNDATION'S 18TH ANNUAL MEETING IN OREGON

Tsin-is-tum or Jennie Michel One of the Last Clatsop Indians







Courtesy Oregon Historical Society (Negatives 4354 and 52426)

to the site of the Lewis and Clark Expedition's Salt Works in present-day Seaside, Oregon (see text). In the right hand photograph she is standing at the rocky ruins of the fireplace (nearly obscured by a 100 years growth of vegetation) where the salt makers boiled ocean water in the distillation process to extract salt. In her senior years, Jennie Michel earned a livelihood making baskets. In the left hand illustration she is pictured with the products of her trade.

By Robert E. Lange¹

In 1904-1905, the Lewis and Clark Expedition and Oriental Fair (World's Fair), Portland, Oregon, celebrated the 100th anniversary of the Lewis and Clark Expedition. At that time local newspapers and periodicals featured articles related to the exploring enterprise's, October 1805 to March 1806, presence in the area.

Several articles concerned the Clatsop Indians who resided along the seacoast and the estuary of the Columbia River. These dissertations pointed out that in 1904-1905 only three full-blooded Clatsop Indians survived, one hundred years after Lewis and Clark and their party visited this region. Three hundred Clatsop were said to be living at the time of the Expedition's visit. The Captains learned that the Clatsops had once been a large and powerful tribe, but had been stricken with an awful plague without a doubt the smallpox. Their dead were entombed among the branches of trees in their priceless and ornamental canoes, which bore eloquent testimony that even at that time the Clatsops were a dying race. One magazine predicted in 1904 that "it will be

 Fifth president of the Foundation, editor of We Proceeded On. only a few years — or possibly weeks — before the last full-blooded Clatsops are gathered to their fathers", and estimated that only, "50 or 75 half-breeds and heirs remain of this vanishing tribe."

One of the three full-blooded Clatsops in 1904 was the ancient2 and wrinkled Indian woman pictured above. Tsin-is-tum, otherwise known as Jennie Michel, lived in Seaside (Oregon), where she made baskets to sell to the many visitors who frequented the seashore resort during the summer months. With a good memory and the characteristics of a good story teller, Jennie was held in great respect by members of the Oregon Historical Society, scholars, and students of Indian life along the Pacific Coast. Her name appears in many volumes, where she is quoted and referred to in footnotes. One journal remarked that "Tsin-is-tum indeed may be said to have entered into history."

It is of special interest to Lewis and Clark students and enthusiasts that at the turn of the century

2. There is considerable confusion concerning Jennie's age. One periodical indicated that "...Tsin-is-tum is generally credited with being over a hundred years old." Other information is that she was born in 1816, and died in 1905, Another article stated that she was aged 86 in 1904.

Jennie Michel identified the site where members of the Expedition established their "salt maker's camp" or "salt works",3 now a National Park Service satellite historical site of the Fort Clatsop Na-tional Memorial.4 The site in south Seaside, Oregon, on the seashore, is in view of Tillamook Head, the headland named Clark's Mountain and Point of View by members of the Expedition. The Expedition's salt makers established a camp near the ocean, and constructed a suitable structure or "fireplace" and by keeping continuous fires under five "Kittles" boiled seawater, in the distilling process, to obtain salt. This site was occupied and the salt making activity was carried on from December 27, 1805 to February 20, 1806, and the process produced "about 20 Gallons"⁵ of salt.

3. In the 1900s the term "Salt Cairn" was used to designate the place of the Expedition's salt making. This, most likely, from the pile of stones found at the site and the dictionary's definition of cairn: "A heap of stones piled up as a memorial or as a landmark".

See: WPO, Vol. 1, No. 1, pp. 11-12; Vol. 5,
 No. 1, pp. 1, 11; Vol. 5, No. 2. pp. 6-7.

5. Thwaites, Reuben G. (Editor), The Original Journals of the Lewis and Clark Expedition, 1804-1806, Dodd, Mead & Co. N.Y., 1904-1905. Seven Volumes and Atlas, subsequent reprint editions in 1959 and 1969. Volume IV, pp. 92, 94.

Olin D. Wheeler in his Trail of Lewis and Clark, 1804-1904, provides the details of his visit with other historians in 1899. In his Volume Two, pages 205 and 206 transcribes Tsin-is-tum's (Jennie Michel's), June 1900, testimony regarding her recollections of Lewis and Clark's presence in the region, and their salt making activities near her home. Wheeler states that From the Proceedings of the Oregon Historical Society, I extract the following interesting paper bearing upon this matter:

I, Tsin-is-tum, otherwise known as Jennie Michel, Say: I am a Clatsop Indian. My mother was named Wah-ne-ask. My father was killed in a bombardment of the Clatsop village by the ship sent by Dr. McLoughlin: I do not remember his name...

I knew Chief Coboway, also my uncle Ka-ta-ta, my relative Nah-satchka, and his brother Twa-le-up and Twilch. They all knew Lewis and Clark and their men, and Ka-ta-ta hunted elk with them. When Lewis and Clark first came and camped on Tongue Point [the Expedition's "Point William" in the Columbia River estuary], the Indians believed they came to make war on them and they cut trees across the rivers near their town so the women and children could run to the woods and hide, and came down the Neahcoxie to the Necanicum [small coastal streams] and hid their canoes . . .

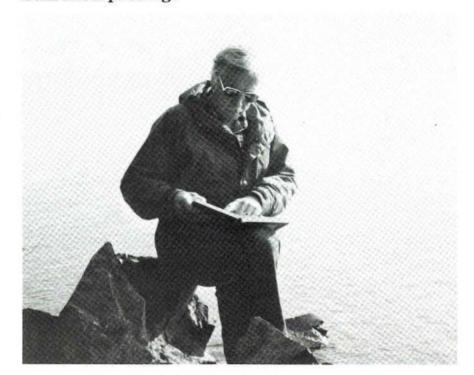
A few days ago I went to the place where Lewis and Clark's men made salt. [I was] with Silas B. Smith, George Norland, L.B. Cox, William Galloway and others. I had often been to this place with my mother when I was a girl and young women picking esulth (kinnikinnick) and quin-quin (salal) berries . . . My mother told me she had often seen Lewis and Clark's men making salt at this place. They always called it Lewis and Clark's place. The Indians said the men who made salt lived in a big tent a little way towards the mouth of the Necanicum from this place. When I saw this place with my mother the rocks in the large pile were built up all around as high as the head of a small child. The end towards the ocean was open

Dated June . . , 1900 her Tsin-is-tum X mark

Witness signature of Tsin-is-tum

George Norland.

 Olin D. Wheeler, The Trail of Lewis and Clark, 1804-1904, G.P. Putnam's Sons, N.Y., 1904. Two Volumes. (Reprint edition 1926, same pagination.) Volume Two, pp. 204-207. Retired Chief of Interpretive Services Still Interpreting!



Foundation Director Ralph H. Rudeen, Olympia, Washington, retired Chief of Interpretive Services for the Washington State Parks and Recreation Commission, retired in 1980 (see WPO, Vol. 6, No. 2, pp. 12-13). For fifteen years Ralph's contributions to scenic and historical interpretation, and especially the Lewis and Clark Expedition, in Washington State have been outstanding and many. His interest in the Lewis and Clark story continues and he serves as Executive Secretary of the (Governor's) State of Washington Lewis and Clark Trail Committee. He is presently serving the (national) Foundation for a one-year term as a Director!. Proof of his continued interest is the above photograph taken along the Washington shore of the Columbia River estuary by Tom Gilbert, Regional Coordinator, National Trails System, Midwest Regional Office of the National Park Service, Omaha, in the fall of 1985. Tom was in the area gathering information and photographs for the Lewis and Clark Historic Trail Brochure being developed by the Midwest Regional Office, Ralph volunteered to meet Tom for a tour of the Washington State Parks and Recreation Commission's Lewis and Clark Interpretive Center, (Cape Disappointment, Fort Canby State Park)3 and other Lewis and Clark Expedition sites along the north (Washington State) shore of the Columbia River Estuary. Tom's photo graph caught Ralph checking-out an 1805 time and place activity of the explorers in the Expedition's (Thwaites') Journals. You just can't keep a good interpreter away from interpretive work!

- 1. Rudeen is filling the directorship vacated by the election of John Montague to the office of 2nd Vice president.
- 2. Foundation Past President (1980-1981) Irving W. Anderson, who also serves as Chairman for the National Park Service's Lewis and Clark National Historic Trail Advisory Council, spent a full week in Omaha last summer working with Gilbert on the brochure project. Rudeen is a member of the Advisory Council.
- 3. See WPO, Vol. 2, No. 4, pp. 1, 3-4.



L. & C. Rendezvous St. Charles, MO

Citizens of St. Charles, Missouri will recall the 1804 days of the Lewis and Clark Expedition when they celebrate the *Lewis and Clark Rendezvous* in St. Charles, May 16-18, 1986. The dates represent the 182nd anniversary of the Expedition's stop at St. Charles soon after the explorers' departure from Wood River (present-day Illinois) on May 14, 1804. The event will feature adventure, skills and arts representative of the early 19th

century, and will take place at a site (the city's Frontier Park) said to have been used by the exploring enterprise in 1804.

There will be black powder shooters in costumes of the era who will test their expertise in competition using 18th and 19th century muzzle loading firearms. Participants will bivouac in Indian teepees and lean-tos. There will be buckskin and homespun-clad craftsmen demonstrating and exhibiting pioneer skills including blacksmithing, candlemaking, quilting and wax sculpting.

The aroma of fresh-baked funnel cakes and buffalo burgers will surround the circle of wagons where traditional foods of the 1804 period will be served. A fife and drum corps' performance, a military ball, fiddle contests, and parades will add to the fun and excitement.

The news release furnished We Proceeded On did not detail any specific historical interpretation related to the Lewis and Clark Expedition other than the dates of the event being involved with the Expedition's 1804 visit to the area.

A Note on the White Pirogue¹

By Gary E. Moulton*

The water craft of the expedition has been the subject of some interest to Lewis and Clark enthusiasts over the years. The keelboat and the white pirogue have been particularly noticed, the latter even being the topic for an article by Foundation member Bob Saindon.² In his essay Bob concerned himself with the uses the men made of the pirogue and incidents connected with it during the trip and he mentioned that it was made of poplar wood. We know this because of the captains' statements in their weather remarks for February 23 and 24, 1805, during the winter at Fort Mandan. On the twenty-third they stated: "got the poplar pe-rogue out of the ice." This has to be the white (or smaller) pirogue because the next day they wrote that they had "loosed the boat [i.e., the keelboat] & large perogue [i.e., the red pirogue] from the ice." We may now be able to clarify the exact type of poplar which was used for building the vessel.

During editorial work on the journals, I am enlisting the aid of numerous scholars in a variety of disciplines. Dr. A.T. (Ty) Harrison, formerly of the University of Nebraska, is the project's botany consultant and has helped us to build on the pioneering work of persons like Dr. Paul Russell Cutright. While working on one section of the journals, Ty was identifying trees that Lewis noticed on Grave Creek Mound, at Moundsville, Marshall County, West Virginia. Among the trees that Lewis mentioned as being at that place was "poplar." Ty at first was inclined to declare this some variety of Populus, cottonwood, but the locale just did not fit, so he began to check synonymies of colloquial names for "poplar," and discovered that a tree common to the area was regionally called by that term. It is Liriodendron tulipifera L., and is known by a variety of colloquial names depending on the region, among them, tulip tree, tulip-poplar, yellow-poplar, whitewood, and of course, poplar.3 Later, when we came to the portion of the journals with the note on the white pirogue we had an idea what the captains meant. Since we knew that it had been obtained in the east, we concluded that it must have been made from Liriodendron, with the captains supplying a regional term.4 Further confirming evidence came to hand.

Ty is also doing some botanical consulting work for the new edition of Prince Maximilian's journals, a project being carried out at Joslyn Art Museum, Omaha, Nebraska. Maximilian was a thorough naturalist and kept excellent notes on the plant and animal species which he encountered. In his work Ty was able to make a useful connection for us between Lewis and Clark and Maximilian. During the winter of 1832-33 at New Harmony, Indiana, the prince visited local forests and included this note on the "tall tulip trees"; "Its wood is greenish, light-yellow —known everywhere as 'poplar' and is used for the usual carpentry work, like our building lumber back home."5 That confirmed the make of the white pirogue for me, but a final serendipitous item settled it for sure. In the December 1985 issue of National Geographic I read an interesting article on Daniel Boone. When I reached the part where Boone is about to leave Kentucky and move to Missouri these words jumped out at me: "In 1799 Boone hewed a canoe from a giant tulip poplar to carry his family down the Ohio to Mississippi."⁶ Four years later, in their "poplar perogue," Lewis and Clark would follow Boone into the wilderness and into history.

- 1. The term Pirogue is of French origin (also Spanish "Piragua"), and is a term defined by Webster's Dictionaries as (1) A dugout cance, (2) A boat like a cance. The Expedition's journalists used a variety of spellings, and to differentiate their two large pirogues employed the terminology "White" for the smaller, six oar vessel, and "Red" for the larger red colored, seven oar vessel.
- 2. Bob Saindon, "The White Pirogue of the Lewis and Clark Expedition," WPO Publication No. 1 (August 1976): 15-22.
- 3. Merritt Lyndon Fernald, Gray's Manual of Botany (8th ed., New York: D. Van Nostrand, 1970), p. 676; Elbert L. Little, Jr., Atlas of United States Trees, Vol. 1, Conifers and Important Hardwoods (Washington, D.C.: United States Department of Agriculture, Forest Service, 1971), maps 137-E, 149-E.
- 4. This statement, and the overall conclusion, supposes an eastern construction. If the pirogues were built later, perhaps at Camp Dubois in Illinois, it is more likely that they would have been made of cotton-wood. No conclusive evidence is available in either case, although Lewis uses the term pirogue for his vessel as early as September 4, 1803. During that early period he apparently used the term canoe and pirogue interchangeably, further confusing the issue.
- William Orr kindly supplied the translation from Maximilian's Journal, January 4, 1833, The InterNorth Art Foundation Collection, Center for Western Studies, Joslyn Art Museum, Omaha, Nebraska. See also, Reuben Gold Thwaites, ed., Early Western Travels (32 vols., Cleveland: Arthur H. Clark, 1905-19), 22:193.
- 6. National Geographic, December 1985, p. 840.

* * * * * *

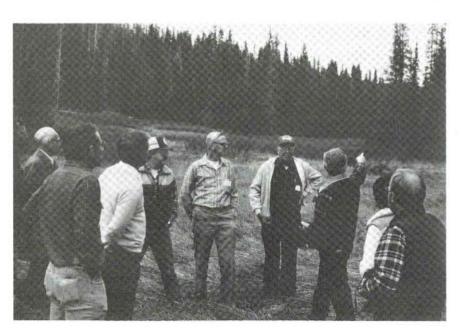
*Editor's note: Foundation Director Gary Moulton is the busy editor for the new, multi-volume edition of the Journals of Lewis and Clark being prepared for publication by the University of Nebraska Press, Lincoln (see WPO, Vol. 5, No. 4; Vol. 6, No. 4). See the review of the first volume, the Atlas of the Lewis and Clark Expedition published in 1983, in WPO, Vol. 9, No. 3.

Idaho Members Make Field Trip To Expedition's Glade Creek Camp Site

Idaho's scenic Lolo Trail abounds with rugged terrain and rocky escarpments, and as these illustrations reveal, in prolific stands of timber and beautiful meadows. If you are an easterner, midwesterner, or Montanan, and planning on traveling by automobile to this year's annual meeting in Oregon, you would enjoy the drive from Missoula, Montana to Lewiston, Idaho, closely following the explorers' trail on Idaho's Highway 12. You will cross 5233 foot high Lolo Pass on the Montana-Idaho stateline before descending into the canyon and the highway that borders the Lochsa River, and eventually the Clearwater River to its confluence with the Snake River (at Lewiston, Idaho and Clarkston, Washington). Adjacent to Lolo Pass are scenic Packers Meadow and Glade Creek Meadow, and near the headwaters of Glade Creek (a tributary of the Lochsa) is the meadow that is the site of the Expedition's September 12, 1805, encampment (Thwaites, III:64).

James Fazio, Chairman of the Idaho [Governor's] Lewis and Clark Trail Committee has supplied WPO with the photographs reproduced to the right. Pictured is the meadow at the Glade Creek Campsite as seen from the spot most likely frequented by the explorers. In the lower illustration, Denny Sigars, Manager of the Clearwater Unit, Plum Creek Timber Company, points out features of the site to members of the Idaho Lewis and Clark Trail Committee. The Glade Creek Camp site is on the company's property, but has been protected in its pristine condition and is available for visitation by the public.





THE FOUNDATION NEEDS THE CONTINUED INTEREST AND ENCOURAGEMENT OF LEWIS AND CLARK ENTHUSIASTS ON A NATION-WIDE BASIS. WE HOPE, IF YOU ARE NOT ALREADY A MEMBER, THAT YOU WILL CONSIDER LENDING YOUR SUPPORT TO THE FOUNDATION. IF YOU REQUIRE ADDITIONAL INFORMATION, A PROSPECTUS DESCRIBING THE FOUNDATION, TOGETHER WITH A MEMBERSHIP APPLICATION, WILL BE FORWARDED PROMPTLY. ADDRESS YOUR REQUEST TO THE SECRETARY.

WE PROCEEDED ON derives from the phrase which appears repeatedly in the collective journals of the Expedition: -

"this morning we set out early and proceeded on ..."

"... wind from the S.W. we proceeded on ... until 6 oClock ..."

"... the fog rose thick from the hollars we proceeded on ..."

"We proceeded on with four men in front to cut some bushes . . ."

"We set out early proceeded on past a Island on the S. Side. . ."

"... clouded up ... We proceeded on under a fine breeze ..."

Capt. Meriwether Lewis, July 19, 1805.

Capt. William Clark, May 14, 1805.

Sgt. John Ordway, June 29, 1806.

Sgt. Patrick Gass, June 18, 1806.

Sgt. Charles Floyd, June 26, 1804.

Pvt. Joseph Whitehouse, October 10, 1805.

WPO SUPPLEMENTARY PUBLICATIONS

These publications bring to members of the Foundation and others, special items of interest, and on occasion, reprints of out-of-print publications that are not otherwise available.

.75¢

WPO Publication No. 1, October 1976 \$2.00

"Proceedings of the Eighth Annual Meeting, August 15-18, 1976, Great Falls, Montana"

Contents: "President's Message", by Wilbur P. Werner; "Status of Missouri River Breaks Wild and Scenic River Legislation", by Edwin Zaidlicz; "Sacagawea and Sacagawea Spring", by E.G. Chuinard, M.D.; "The Expedition's Journals — Captain Lewis's Discovery and Description of the Great Falls of the Missouri River", by Robert E. Lange; "The White Pirogue of the Lewis and Clark Expedition", by Bob Saindon.

WPO Publication No. 2, July 1977

"Our Dog Scannon - Partner in Discovery"

Ernest S. Osgood's monograph about the Expedition's Newfoundland dog. A delightful perspective of the canine member of the exploring party. Reprint from *Montana the Magazine of Western History*, Vol. XXVI, No. 3, Summer 1977.

WPO Publication No. 2A, March 1986 \$2.00

"Call him a Good Old Dog, But Don't Call Him Scannon", by Donald Jackson. Reprint from We Proceeded On, Vol. 11, No. 3, July 1985.

This is a companion publication to WPO, Publication No. 2, Ernest S. Osgood's monograph about the dog member of the Expedition. Historian Donald Jackson, while researching geographical names related to the Lewis and Clark Expedition, discovered that a beautiful stream in west-central Montana was named "Seaman Creek", and suspected that it was named after the Expedition's Newfoundland dog. Dr. Jackson's "detective" work provides evidence that earlier historians had misinterpreted Captain Lewis's, Captain Clark's, and Sergeant Ordway's journal handwriting and applied the nomenclature "Scannon" for the dog. This is a twelve page publication with maps, handwriting reproductions from the journals, and illustrations of present-day Monture Creek.

Please note that a special price of \$2.50 applies when both the WPO, Pub. No. 2 and WPO, Pub. No. 2A are purchased together. Specify: WPO, Pub. Nos. 2/2A.

WPO Publication No. 3, July 1978 \$1.50

"Beacon Rock on the Columbia: Legends and Traditions of a Famous Landmark", by Henry J. Biddle.

A reprint of Biddle's 1925 monograph concerning the acquisition and preservation of the 800 foot high landmark on the Columbia River. Lewis and Clark described the geologic formation in 1805-1806. Annotations by Robert E. Lange.

WPO Publication No. 4, December 1980 \$2.50

"Three Papers Presented at the Foundation's 12th Annual Meeting, Omaha, Nebraska, and Sioux City, Iowa, August 20-22, 1980"

Contents: "Sergeant Floyd and the Floyd Memorial at Sioux City, Iowa", by Edward Ruisch; "Some Thoughts on the Death of Sergeant Charles Floyd", by E.G. Chinard, M.D.; "Expansion of the Fur Trade Following Lewis and Clark", by Charles E. Hanson, Jr.

WPO Publication No. 5, August 1981 .75¢

"Thirteenth Annual Meeting — Visit to the Missoula County Courthouse — The Edgar Samuel Paxson Murals", compiled by Robert E. Lange.

The visit to the Missoula, Montana, courthouse was an event during the Foundation's Annual Meeting. This publication provides biographical information about Montana artist Edgar Paxson, and descriptions of two of the eight Paxson murals in the courthouse that depict incidents related to the Expedition in the Missoula Area.

WPO Publication No. 6, July 1982 \$4.00

"Contributions of Philadelphia to Lewis and Clark History", by Paul Russell Cutright. 52 pages, illustrations.

Dr. Cutright provides an in-depth study of activities related to the Expedition in Philadelphia, both before (1803) and after (1807-1814) the explorers' return. Litterateur Nicholas Biddle's contribution toward seeing to the publication of a narrative based on the Captains' journals is included in Dr. Cutright's fine monograph.

WPO Publication No. 7, May 1984 \$4.00

Lewis's Woodpecker - Clark's Nutcracker

Color portraits of birds whose names memorialize the surnames of Captains Lewis and Clark. Reproduced from color paintings by Marie Nonnast Bohlen through the courtesy of Fawcett Publications and publisher Prentice-Hall, Inc.

Two 8 X 10 inch portraits with descriptive captions on fine paper stock in authentic color, and suitable for framing.

For more information concerning the ornithology of the Lewis and Clark Expedition, see *We Proceeded On*, Vol. 10, Nos. 2 & 3, May 1984.

WPO Publication No. 8, November 1984 \$3.00

"Meriwether Lewis and William Clark and the Discovery of Montana", by Harry W. Fritz, 32 pages, maps.

This is an unabridged transcript of a paper presented at the 16th Annual Banquet of the Foundation, Great Falls, Montana, August 8, 1984. Dr. Fritz in his fine speaking and writing style, and backed by his extensive knowledge, has produced this review of the purpose, organization and personnel of the exploring enterprise. In addition it presents a fine recapitulation of the Expedition's documentation of their experiences and discovery of what is today the great state of Montana. It was in Montana where the exploring party spent the most "traveling" days while traveling the most miles, overcame one of their greatest obstacles to their favorite river travel (the Great Falls of the Missouri), and established their most numerous night encampments.

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