Major Long's Route from the Arkansas to the Canadian River, 1820

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FIG. 2. Sketch of the black tail deer made by Titian Ramsay Peale the evening of August 1, 1820. In the background is a depiction of a butte, sketched by Peale the following morning when Major Long's party passed the four buttes in the valley of Ute Creek near present-day Bueyeros, Harding County, New Mexico. (Mr. Richard H. Skryrock, Librarian of the American Philosophical Society, Philadelphia, has kindly granted per-
In the early history of the United States, first-hand knowledge of the vast reaches of the Rocky Mountain region was almost solely the possession of trappers and fur traders. The history of scientific exploration and research in this region may be considered to date from the expedition of Lewis and Clark. Developments came about slowly, however, despite the growth of commercial trade via the Santa Fe Trail from the early 1820's onward. It was not until the 1840's, with their numerous government-sponsored expeditions and surveys, that scientific knowledge began to grow apace.

Of the earliest official expeditions to the West, the one to the Rocky Mountains in 1820 under the command of Major Stephen H. Long is well-known to students of early western history. Although perhaps not so widely known to the general public as the expeditions of Lewis and Clark or Pike, its accomplishments were, nevertheless, substantial and noteworthy. A journal of the expedition was published in 1823 by Dr. Edwin James, the botanist and geologist of the party.¹

¹ Edwin James, Account of an Expedition from Pittsburgh to the Rocky Mountains Performed in the Years 1819, 1820. This was published in Philadelphia in 1823 (Carey and Lea), then, with occasional but trivial changes, in London (Longman, Hurst, Rees, Orme, and Brown) the same year. This will be cited hereafter as "James, Account," the Philadelphia edition being the one quoted.

Augustus Edward Jessup was originally appointed geologist of the expedition; but he remained with the group during the first season (1819) only, and so did not make the trip to the Rockies in 1820.
This is a compilation to which several other members of the expedition contributed, notably Major Long himself, and Thomas Say, the zoologist. It comprises a record of daily events, the itinerary of the party, and observations on weather conditions, the flora and fauna, topography, and geology of the country through which they passed. Until recently this was the only narrative of the expedition, and consequently it has been the principal source of information available to students of this period.²

Portions of James' itinerary are seemingly quite sketchy and indefinite. For this reason some writers on early western explorations have been quite critical of the expedition and its published records. Chittenden, for example, was quite severe: "The route from the time the party left the South Platte until they arrived at the Canadian is extremely difficult to follow except along the Arkansas. It would be scarcely possible to find in any narrative of Western history so careless an itinerary, and in a scientific report like that of Dr. James, it is quite inexcusable."³ Similar sentiments (although expressed somewhat less harshly) have been echoed by a number of later writers.⁴ A more sympathetic appraisal of the expedi-

². Much additional information on the Long expedition has become available with the recent publication of "The Journal of Captain John R. Bell" (edited and with introductions by Harlin M. Fuller and LeRoy R. Hafen; Arthur H. Clark Co., Glendale, Calif., 1957. This is Vol. VI in "The Far West and the Rockies Historical Series," LeRoy Hafen, ed.). Captain Bell, the official journalist for the expedition, parted company with Long on the Arkansas River, however, and the present account is concerned with Long's route southward to the Canadian River.

I have also consulted a microfilm of Edwin James' "Diary and Journal Notes, 1820-1827" (Bancroft Library, University of California, Berkeley; original in the Columbia University Library, New York). This is a diary which James kept while on Long's expedition to the Rockies and after its return while he was writing the narrative of the expedition. Regular entries, with some gaps, extend from March 22, 1820, to January 9, 1823. Also included is a narrative of his service as an army surgeon in Minnesota and Iowa, 1824-1827. This will be cited hereafter as "James, Diary."³


tion has recently been given by Poesch. It may be noted, also, that scientific contemporaries of Long's group seem to have been more understanding. Thus, the botanist, John Torrey, who worked up a large part of Edwin James' plant collections, acknowledged the extreme difficulties under which the labors of the expedition were performed.

There can be no gainsaying the fact that Long failed in considerable degree to accomplish the major objectives of exploration with which he had been charged. On the other hand, even the most casual reading of James' Account impresses one with the privations and hardships frequently suffered by Long's party, especially in crossing the region with which we are concerned—extreme hunger and thirst, apprehension of encounters with hostile Indians, and lack of adequate protection from the elements. Under such conditions it is scarcely to be wondered that their devotion to science and duty might occasionally have been compromised by the urge simply to survive—to get back to civilization alive. Furthermore, the criticism that better results should have been produced by "men like Long, Graham, and, especially, Edwin James, . . ." and the thesis that these men were "experts whose qualifications were the best available" would seem to be debatable. The latter characterization may have applied to Long, himself, and to Thomas Say, the zoologist, but as for most of the others who finally set off for the Rockies, such a statement is badly out of focus. Edwin James was only 22 at the time he joined the expedition, and although a young man of considerable promise, was certainly not an es-


6. John Torrey, "Some account of a collection of plants made during a journey to and from the Rocky Mountains in the summer of 1820, by Edwin P. James, M.D., Assistant Surgeon U.S. Army," Annals of the Lyceum of Natural History of New York, Vol. 2, pp. 161-254 (1828): "... As this extensive tract of country [lying between the Arkansas and the Canadian] was traversed with great rapidity, and the party was exposed to great hardships and privations, little opportunity was afforded of making observations, or even of recording all the stations of the plants; and many of the specimens, owing to the same unfavorable circumstances, are injured or incomplete," pp. 161-162.

7. Goetzmann, op. cit., p. 44.
established "expert" in any professional sense, either botanically or geologically.\textsuperscript{8} It may be noted that several other members of the expedition, James D. Graham, William H. Swift, and Titian R. Peale, were even younger than James.\textsuperscript{9}

The accomplishments of the expedition, in the fields of zoology and botany at least, were moderately substantial. Even so, one can only speculate on what they might have achieved had they had support from the government commensurate with the importance of their undertaking: more pack animals, better protection for their precious collections (both from the elements and from the roughness of the journey) and above all, simply more \textit{time}\textsuperscript{10} which would have enabled them to collect and prepare more specimens of the new and fascinating flora and fauna of the country through which they passed. For surely it was factors such as these in far greater measure than "lack of techniques for investigation"\textsuperscript{11} that so often hampered their efforts and limited their productiveness.

It is not the purpose of this study, however, to evaluate in detail the accomplishments or shortcomings of Long's expedition. My objective, rather, is to clarify Long's route on his march southward from the Arkansas in search of the Red River. The party's itinerary, as noted by Chittenden, is indeed difficult to follow at times, especially in the region between the Arkansas and the Canadian. Nevertheless, some very good clues to their line of march are to be found in James' geological observations in his \textit{Account}—clues which heretofore apparently no one has attempted to exploit. Inasmuch as an extensive survey of the geology of northeastern

\textsuperscript{8} James was born August 27, 1797, and joined Long's expedition in the spring of 1820. See C. C. Parry, "Dr. Edwin James," \textit{American Journal of Science}, Ser. 2, Vol. 33, pp. 428-430 (1862).


\textsuperscript{10} As noted by Poesch (\textit{op. cit.}, p. 27), during the first summer (1819) William Baldwin, the botanist (who died Aug. 31, 1819), "questioned the possibility of the naturalists being able to accomplish much on an expedition of this sort" inasmuch as "their orders demanded that they push forward so steadily."

\textsuperscript{11} As Goetzmann (\textit{op. cit.}, p. 44) expressed it.
New Mexico has recently been published, a basis is now at hand for correlating many of James' observations with existing geological formations in this region.

This study began with an attempt to determine the type locality of the first oak to be described from the Rocky Mountain region, *Quercus undulata*. This species was named and described by the (then) rising young botanist, John Torrey, in 1828, on the basis of a collection by James. The type locality (i.e., the site of collection of James' specimen), as stated by Torrey, was "sources of the Canadian and the Rocky Mountains." Obviously, this is highly indefinite, although perhaps little else could have been expected in such a poorly known and essentially uncharted region. Thus, in any attempt to establish this locality, it was necessary, first of all, to determine Major Long's—and, of course, Edwin James’—route as accurately as possible. In this attempt, the evidences provided by a close study of James' *Diary* and his published *Account*—particularly his observations on the geology and topography of the country—have gone far toward clarifying the party's itinerary. Furthermore, a generally held misconception has been revealed in regard to one major detail of Long's route across this region. It would seem worthwhile, therefore, to put these findings on record.

The route followed by Major Long's party, as it has been worked out from the available evidence (Fig. 1), can be described quite briefly. Following a brief, categorical descrip-


I have also had the benefit of extended and very helpful conferences with Dr. Baldwin and Dr. Muehlberger, the former at Middlebury College, Middlebury, Vermont, September 11, 1961; the latter at the University of Texas, Austin, September 13, 1961. Dr. Elmer H. Baltz, Geologist, U. S. Geological Survey, Ground Water Branch, Albuquerque, New Mexico, whose knowledge of northeastern New Mexico is also very extensive, has been most helpful on several occasions. Others who have been consulted on matters of geology or geography are: Dr. Charles J. Mankin, Dept. of Geology, University of Oklahoma; Mr. Zane Spiegel, Research and Development Division, New Mexico Institute of Mining and Technology, Socorro; and Mr. Sherman E. Galloway, Engineer, Technical Division, New Mexico State Engineer Office, Roswell.

tion, I shall document my statements with a more extended discussion, pointing out particularly any views which differ from those generally expressed by earlier authors.

Major Long's party crossed the region between the Arkansas River and the Canadian in the twelve days from July 24 to August 4, 1820, judging by James' Account. Disregarding distances traveled on individual days, their general route was as follows:

The group left the Arkansas near the present community of Rocky Ford, Otero County, Colorado, approximately 36 miles upstream from the confluence of the Purgatoire River, traveled southward to the latter stream, ascended it for a few miles, and then turned up a tributary from the southeast. In all probability this was Chacuaco Creek. Following the canyon of this stream to its upper reaches, they emerged onto the plain just west of the Mesa de Maya. They continued in a general southerly direction to near the present Colorado-New Mexico state line, skirted to the west of some high, rough hills, and descended to the Dry Cimarrón River, in northwestern Union County, New Mexico, possibly by way of Tollgate Canyon, but not by way of Long's Canyon. Proceeding southward from the Cimarrón, the party traversed the high plain to the east and southeast of Sierra Grande. In doing so they crossed the headwaters of Travesser Creek, the ultimate sources of the North Canadian River, and, still farther south, Carrizo Creek—along this line of march all were insignificant creeks. On July 30, the party struck Ute Creek in present southwestern Union County, a short distance downstream from the present crossing of U. S. Highway 56. On the next day, they continued down Ute Creek, but on August 1, remained in their camp to rest. Resuming their journey on August 2, they continued down Ute Creek, and on August 4 arrived at the Canadian River. Thus, contrary to a widely held view, the party did not descend Major Long's Creek (or Punta de Agua) to the Canadian, but rather, Ute Creek.

Major Long's itinerary will now be presented at greater
Fig. 1. The route of Major Long's party from the Arkansas River to the Canadian, July-August, 1820. (The squares are present-day townships, ordinarily six miles on a side. The location of the area of this map is shown in black on the small inset map at lower right.)
length, beginning while the expedition was heading away from the mountains and descending the Arkansas, several days before Long's departure from that stream:

July 20

The party broke camp at 5 a.m. and soon afterwards passed the mouth of a stream which, in all probability, was the Huerfano River.\textsuperscript{14} They traveled 26 miles that day.\textsuperscript{15}

July 21

Arising at 5 a.m., and having descended the Arkansas for "six or eight miles," according to James, they encountered an Indian and his squaw who were heading for the mountains. "At our request," James' \textit{Account} continues, "the Kaskaia and his squaw returned with us several miles, to point out a place suitable for fording the Arkansas. . . . At ten o'clock we arrived at the ford. . . ."\textsuperscript{16}

They made camp at the ford, remaining there the rest of the day, as well as July 22 and 23. Here they made preparations for separating into two groups, following a predetermined plan. One group, under Captain John R. Bell, was to descend the Arkansas to Fort Smith. The second group (including Dr. James), under Major Long, was to head southward in an attempt to locate and explore the headwaters of the Red River.

On the basis of the estimated distances given in James' \textit{Account}, this camp would probably have been somewhere between 34 and 36 miles downstream from the confluence of the Huerfano (26 minus one, or 25, say, for July 20; plus "6 or 8," and an additional "several"—say 3—miles for July 21; total: 34 to 36 miles). Any attempt to plot this distance on a map gives, at best, only a rough approximation of the location of their camp. In any event, 34 to 36 miles below the mouth of the Huerfano would place them 2 to 4 miles below the present community of Rocky Ford, Otero County. Chit-

\textsuperscript{14} Thwaites, \textit{op. cit.}, Vol. 16, footnote p. 62.
\textsuperscript{15} James, \textit{Account}, Vol. 2, p. 59.
\textsuperscript{16} \textit{Ibid.}, p. 61.
tenden supposed this camp to be "in the vicinity of the present town of La Junta." Thwaites, however, taking note of their distances travelled after passing the Huérfano, surmised that their camp must have been several miles up the Arkansas above the site of La Junta.

A much less equivocal basis for determining the location of this camp is provided by the compass readings taken by the party while encamped at the ford: Pike's Peak, north, 68° west; and the West Spanish Peak, south, 40° west. Then, if we take into account the magnetic declination of 13½° east of true north which James recorded a few days later in taking some other readings, the position of their camp can be readily plotted on a map. Whatever shortcomings their figures for latitude and (especially) longitude may have had, a compass—as long as the needle was free to turn on its pivot—would give results the accuracy of which would be limited only by the skill and carefulness of the person making the readings. Considering James' statement that these observations "received the most minute and careful attention," there would seem to be no valid reason to mistrust them. Using a large steel straight-edge and a heavy steel protractor, I plotted their position on the U.S. Geological Survey Map, "State of Colorado," Scale 1:500,000, Edition of 1956. The resulting locus was slightly less than ½ mile west of, and

19. Referred to in James, Account as "James' Peak," a name applied by Major Long after James' successful ascent of the peak on July 14, 1820 (See Thwaites, op. cit., Vol. 16, footnote p. 86).
22. Except insofar as any iron ore deposits might be present in the region, which, of course, would affect a compass. This possibility seems quite remote, however, for what few iron ore deposits are recorded for Colorado, are far to the west of their location. (See Martha S. Carr and Carl E. Dutton, "Iron-Ore Resources of the United States Including Alaska and Puerto Rico, 1955," U. S. Geological Survey Bulletin 1082-C, 1959, Table 4, p. 97, and map: Plate 2).
LONG'S ROUTE

approximately 2\(\frac{3}{4}\) miles north of the ford on the Arkansas.\(^{24}\) To this extent, therefore, my plotted location must be in error, for Captain Bell stated in his journal that the expedition camped "on the margin of the river, where is good fording place."\(^{25}\) Nevertheless, this locus is a clear indication that the historic ford on the Arkansas near the present community of Rocky Ford was the point of departure of Major Long's party when he began his journey southward in search of the Red River.\(^{26}\)

**July 24**

The party divided. One group, under Captain John R. Bell, was to continue down the Arkansas. The other group (including Edwin James), under Major Long, was to head southward in an attempt to explore the headwaters of the Red River. The latter party crossed the Arkansas and pro-

\(^{24}\) I am indebted to Mr. Garth W. Grenard, County Clerk and Recorder of Otero County, who has indicated for me the exact location of this ford. (Correspondence with G. W. Grenard, July 25, 1962).


\(^{26}\) It may be noted that several other authors have placed the site of the division of the party near Rocky Ford: P. S. Fritz, *Colorado, the Centennial State* (New York, 1941), p. 80; Jerome C. Smiley et al, *Semi-centennial History of the State of Colorado* (Chicago, New York, 1913), Vol. I, p. 106; and Fuller and Hafen, *op. cit.*, footnote p. 181.

This ford on the Arkansas, in addition to being known to the Indians of the region, came to be well-known to white traders in later years. Thus, we find a reference to it in an article by George W. Thompson, "Experiences in the West," in *The Colorado Magazine*, Vol. IV (December, 1927), p. 178: "We crossed the Arkansas River near Bent's Old Fort on New Year's Day, 1865. The ford twenty miles above was used in high water by freighters carrying goods that would be ruined if wet. This 'Rocky Ford' has given its name to the present town at that location." Information regarding the history of the town, itself, may be found in LeRoy R. Hafen's article, "Colorado Cities—Their Founding and the Origin of Their Names," *The Colorado Magazine*, Vol. IX (September, 1932), p. 181, from which the following is an excerpt: "The first Rocky Ford was located on the Arkansas River in 1868, by A. Russell, who started a trading store there. In 1870 George W. Swink joined Russell. After the extension of the Santa Fe railroad to Pueblo, the post office was moved from the old town on the river to the railroad station three miles away. At the new location Russell and Swink laid out the present town in 1877. . . ." (I am indebted to Mr. J. L. Frazier, Deputy State Historian, Colorado State Museum, Denver, who very helpfully brought these two references to my attention).
ceeded "a little to the east of south, . . . nearly at right angles to the direction of the Arkansa. It was our intention to cross to, and ascend the First Fork. . . ." Their route, as indicated on Major Long's map, crossed a northeast-flowing stream during that day's journey, although no mention of this is made in James' Account. This could well have been Timpas Creek. It may be noted, also, that Captain Bell recorded in his journal for that morning the observation that " . . . 5 miles from our last camp [i.e., farther downstream], discovered a creek entering [the Arkansas] from the south, . . ." The editors presume this to have been Timpas Creek, which Long's party would have had to cross if they had headed south from near Rocky Ford, but not if they had departed from near La Junta. According to James' Account, they travelled 27 miles that day, and camped "near the head of a dry ravine, communicating towards the southeast with a considerable stream, which we could distinguish at the distance of eight or ten miles, by a few trees along its course." This "considerable stream," which they reached the following day, was the Purgatoire, as noted by Thwaites. On Major Long's map, their camp for this evening is indicated as being on a stream running into the Purgatoire in a direction more nearly east-southeast. This could have been Jack Canyon, in the north central part of T.27S., R.56W. This, however, would have been more nearly 25 than 27 miles from their camp on the Arkansas of the preceding day.

27. James, Account, Vol. 2, p. 67. This is the Purgatoire, or Purgatory River, according to Thwaites, op. cit. Vol. 16, footnote p. 62.
28. "Map of the country drained by the Mississippi"; which was included in James, Account. Unfortunately, this map is sometimes not in agreement with James' narrative. For example, on July 27, the party's camp is indicated as being on a major watercourse, the "Negracka or Red Fork." The narrative, however, makes no mention of any such stream on that day, nor, indeed, would they have encountered any between the Purgatoire watershed and the Cimarrón, where they encamped on July 28.
30. James, op. cit., p. 69.
July 25

The party struck the Purgatoire in the middle of the day and after following up it for only a few miles „ „ entered the valley of a small creek, tributary from the southeast. „ „ This must have been Chacuaco Creek, as surmised by Chittenden 34 and Thwaites. 35 They proceeded with great difficulty up Chacuaco Creek and „ „ halted for the night, having travelled fifteen miles. 36 For reasons to be explained later, this camp was probably at the upstream end of the conspicuous „ „meanders,“ 37 or sinuosities on Chacuaco Creek, which occur in the southern part of T.30S., R.56W.

July 26

The party continued up the stream, camping near its head that afternoon, their course during the day being „ „ south,“ and the distance travelled being estimated at 15 miles. 38 „ „The actual distance passed, must have been much greater, as our real course was extremely circuitous, winding from right to left in conformity to the sinuosities of the valley. “ 39 Their camp of this evening was probably in the northwest corner of T.33S., R.56W.

July 27

They arose at an early hour and, James continues, „ „at sunrise, we resumed our toilsome march, and, before ten o’clock, had arrived at a part of the valley beyond which it was found impossible to penetrate. The distance we had travelled would have been, in a direct line, about three miles. In passing it, we had followed no less than ten different courses, running in all possible directions.” 40 Finding it ne-

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34. Chittenden, op. cit., Vol. 2, p. 581 (who refers to it as Chaquaqua Creek).
35. Thwaites, op. cit., footnote 45, p. 69.
37. See U. S. Geological Survey Topographic Map, „ „Mesa de Maya“ (edition of Nov. 1898, reprinted 1948) on which these meanders are conspicuous, ending less than a mile above the mouth of Water Canyon.
38. James, Account, Vol. 2, p. 73
39. Ibid., p. 75.
40. Ibid.
cessary to backtrack for a mile and a half, they were finally able, with great difficulty, to emerge from the canyon.

An apparent mixup occurs in James' Account, the forenoon of the 27th. Here he states that "on the preceding day" (i.e., July 26) the valley was bounded by cliffs of red sandstone, and "As we ascended gradually along the bed of the stream, we could perceive we were arriving near the surface of this vast horizontal stratum and, at night, we pitched our tent at the very point where the red sandstone began to be overlaid, in the bed of the creek, by a different variety . . . the gray sandstone. . . ."  

This must surely have been their camp for the evening of the 25th, rather than the 26th. The upper limit of this red sandstone is encountered at the upper end of the conspicuous meanders on Chacuaco Creek mentioned previously. A camp here would be perhaps twelve miles above the mouth of Chacuaco Creek (disregarding the sinuosities of the canyon) or around fifteen miles above the point where they struck the Purgatoire. This would be in close agreement with James' estimate of their mileage for the 25th. Furthermore, in the Account for the 25th, James describes coming to the end of the red sandstone and entering upon the gray variety.

When Major Long's party finally emerged from the canyon of Chacuaco Creek, they proceeded "one mile and a half into the plain in a due south course" and made a series of observations: "Due east, was a solitary and almost naked pile of rocks, towering to a very considerable elevation above the surface of the plain. James' [i.e., Pike's] Peak bore north 71° west; the west Spanish Peak, south, 87° west; magnetic variation, 131½° east."

41. This red sandstone is the "unnamed formation" of the Dockum Group of Triassic age, and is overlain by the Entrada Sandstone of Jurassic age. The latter is stained red in many places and probably would not be differentiated from the Dockum sandstone by a casual observer. Elmer H. Baltz.

42. James, Account, Vol. 2, p. 76.

43. According to Brewster Baldwin.

44. In the London edition, this statement reads "... towering to a great elevation. . . ."

When plotted on a map these readings place the position of the party far to the east of where they must have been, if previous assumptions about their route are correct. It may be noted that Chittenden, a topographer himself, merely mentions these readings without making any apparent attempt to use them in locating the position of the party. I am indebted, therefore, to William Muehlberger for a thoroughly credible explanation for this apparently anomalous situation. If the party had indeed been on upper Chacuaco Creek, the reading on the west Spanish Peak would fit very well. The reading given for Pike's Peak, however, bears not on that mountain, but on Greenhorn Mountain, a peak 20 miles northwest of Walsenberg, lying at the southeastern end of the Wet Mountains in northern Huerfano County. According to Dr. Muehlberger, this mountain would be quite conspicuous as seen from the plains to the southeast, where Long's party would have viewed it. It stands out from the surrounding mountains, being set off by a depression on either side of it—the valley of the Arkansas to the northeast, and the upper Huerfano Valley (Huerfano Park) to the southwest. Thus, the party having been confined in Chacuaco Canyon out of sight of the mountains for two days, on emerging onto the plain looked in the general direction that Pike's Peak had been, and there, fulfilling their expectation, was indeed a conspicuous peak!

Their readings, when plotted on a map, locate their position just northwest of the Mesa de Maya, in the northwest quarter of T.33S., R.56W., approximately 2 miles east of where I have placed their camp of the previous night. This location, however, would seem to be about 5 miles too far to

47. Their compass reading on Pike's Peak from their last camp on the Arkansas was: north 68° west; their reading on Greenhorn Mountain is remarkably similar: north 71° west. As a reading on Pike's Peak from farther south, however, this higher figure would have been an impossibility. It seems strange that this was not noticed.
48. U.S.G.S. Map, "State of Colorado." Using a straight-edge and heavy steel protractor (and taking the reading on Greenhorn Mountain rather than Pike's Peak, of course), I plotted the readings several times, but the resulting loci were all within perhaps a mile of each other, at the general location mentioned above in the text.
the northeast, for their actual position was probably just off the western end of the mesa, perhaps a mile west of the southeast corner of T.33S., R.57W. This assumption is warranted by (1) the distances they had travelled since coming upon Chacuaco Creek, and particularly by (2) James' observation of a "solitary and almost naked pile of rocks towering to a very considerable [or great] elevation above the surface of the plain," lying due east of their position. This could well have been the conspicuous promontory on the Mesa de Maya at its extreme western end. The summit of this eminence stands 1,000 to 1,200 feet above the surrounding plain and is very nearly the highest point on the Mesa. I myself have observed it from a point perhaps 2 miles due west of the Mesa. Viewed through binoculars, it fits James' description quite well. Long's party must certainly have seen this promontory, for they would have had to skirt past the west end of the mesa in order to continue their journey southward, and of all the features of the landscape along their route through the area, this would probably have been most apt to evoke comment.

If, on the other hand, one assumes that their compass readings indicated their true position, James' statement regarding the "solitary and almost naked pile of rocks" would be puzzling indeed. At a distance of 10 miles due east they would almost certainly have seen Fowler Mesa. However, it rises only about 400 feet above the surrounding plain and from that distance it would hardly have appeared like a "pile of rocks towering to a great elevation." The much higher, nearer, and more conspicuous west end of the Mesa de Maya

49. Essentially the same conclusion was reached by Dr. Claude M. Rogers, Dept. of Biology, Wayne University, Detroit, Michigan, in the course of a vegetation study of the Mesa de Maya (see his paper, "The Vegetation of the Mesa de Maya Region of Colorado, New Mexico, and Oklahoma," Lloydia, Vol. 16, pp. 257-290, 1953): "In answer to your inquiry about the Long Expedition, I did conclude that the 'pile of rocks' he described was probably the Mesa de Maya... from where James might have viewed the mesa, it does stand alone and rises nearly 1,500 feet above the surrounding plain and therefore would seem to fit his description very well" (Correspondence with C. M. Rogers, September 12, 1960).

50. See A. M. S. Map, "La Junta."
would have been south of them—not due east. One is led to conclude, therefore, that their actual position was that previously stated, and that this small discrepancy was due to differential shrinkage or stretching of the map used (see footnote 25).

They proceeded on their way, halting to make camp at 5 p.m. “having travelled about ten miles nearly due south from the point where we had left the valley of the creek.” In several instances the directions reported by James appear to be compass readings uncorrected for magnetic declination. A case in point is their route up Chacuaco Creek, which James reported as being “nearly south.” Actually, the general trend of this stream (from mouth to source) is $13-15^\circ$ west of south. Inasmuch as James reported a “magnetic variation” of $13\frac{1}{2}^\circ$ east of true north on this day, this should be kept in mind whenever he stated their direction of march. Thus, in the present instance, “due south” could be taken as south, $13\frac{1}{2}^\circ$ west. The distance stated (ten miles) appears to be a bit too much, also. A likely site for their camp of this evening would be in the south-central part of T.34S., R.57W., and probably no more than about 4 miles from the present Colorado-New Mexico state line.

**July 28**

“From an elevated point, about eight miles south of our encampment,” James begins this day’s account, “the high peak at the head of the Arkansas was still visible.”

According to Brewster Baldwin, this elevated point could have been Nigger Mesa, on the flank of which a good view may be had from only 100 feet or so above the general level.

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52. In James, Diary: “six or eight miles....” This distance was probably nearer six than eight miles.
55. A local name for a small mesa in T.32N., R.29E. (the position of the party was probably in Sec. 27) ca. 4 miles west-northwest of Devoy’s Peak, and just south of the Colorado state line in Union County, New Mexico. Although not generally found on maps of this region, the name is used in Baldwin and Muehlberger, “Geologic Studies of Union County, New Mexico,” New Mexico Bureau of Mines, Bull. 63 (Socorro, 1959) ; see, for example, Plate 7.
of the surrounding terrain. Muehlberger, furthermore, cites several passages in James' account of that morning that suggest this mesa or its environs: "We perceived before us a striking change in the aspect and conformation of the surface; instead of the wearisome uniformity, the low and pointless ridges, which mark the long tract of horizontal sandstone we had passed, we had now the prospect of a country varied by numerous continued ranges of lofty hills, interspersed with insulated conelike piles, and irregular masses of every variety of magnitude and position." According to Muehlberger, such a view could have been obtained from the south side of Nigger Mesa, where the party could have seen Sierra Grande, Emery Peak, Capulin Mountain, José Butte, Robinson Mountain, Palo Blanco, and others.

In the next paragraph, James makes this observation: "In the ravines, and over the surface of the soil, we observed masses of a light, porous, reddish-brown substance, greatly resembling that so often seen floating down the Missouri, by some considered a product of pseudo-volcanic fires, . . . We also saw some porphyritic masses with a basis of greenstone, containing crystals of felspar." According to Muehlberger, the first is evidently a description of scoria, or volcanic cinders, which, although not common north of the Dry Cimarrón, are indeed to be found around Nigger Mesa. The second is a description of the basalt of the area. Although the basalt from farther south is usually not porphyritic, that from the area around Nigger Mesa is, according to Muehlberger.

It may be noted that the party would have had to drift slightly to the west in order to have struck Nigger Mesa, even assuming their "southward" line of march to have been some 10-15° west of south, as postulated above. Such a route would probably have been necessary. Had the party followed a line

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57. Ibid., p. 80.
58. In the opinion of Mr. Elmo Traylor, Area Supervisor, Northeast Area, New Mexico Dept. of Game and Fish, Raton. Mr. Traylor, a long-time resident of northeastern New Mexico, has an intimate knowledge of the terrain from years spent in the field as
Fig. 3. Top: The butte in the background of Peale's sketch of the black tail deer.
Bottom: The butte which Peale sketched, as it appears today. (Photograph by Loren D. Potter, Sept. 7, 1962). This is in the valley of Ute Creek, in the south half of the northwest quarter of Section 28, T.21N., R.30E., in Harding County, New Mexico.
of march southward from the Mesa de Maya, they would have encountered the upper course of Long’s Canyon. The several upper branches of this canyon, that rise to the south and southwest of the western end of the Mesa de Maya, have such precipitous canyon walls that it would have been virtually impossible to cross them with horses. The logical move, therefore, would have been to bear to the west and skirt around the several forks of upper Long’s Canyon.

There is no mention of such a move in James’ Account. Indeed, his narrative for that afternoon states that their course was “a little east of south” (italics mine). Therefore, one must acknowledge the speculative nature of postulating such a drift to the west. If this assumption is made, however, later comments and observations fall properly into place, whereas if one supposes that the party held to a course a little east of south, as James stated, their route becomes inexplicable indeed. In fact, if one tries to work solely from the stated directions in James’ Account, the course of this day’s journey is the most problematic of the entire march from the Arkansas to the Canadian. To be sure, a course a little east of south would point them toward Long’s Canyon (mentioned above). The implications of this name are obvious, but for reasons which will be presented later, Long’s Canyon must be ruled out as the route followed by Major Long’s party.

Continuing, then, with James’ narrative for the afternoon of July 28: “Our course, which was a little east of south, led us across several extensive vallies, having a thin dark coloured soil, closely covered with grasses and streewed with

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59. Just when this name was first applied, or by whom, I have been unable to determine. In reply to an inquiry on this point, Mr. J. L. Frazier, Deputy State Historian at the State Museum, Denver, writes as follows: “Our files do not indicate by whom, after whom, or when Long’s Canyon was named; but, Mrs. Agnes Wright Spring, state historian, agrees with me that in all probability, Long’s Canyon was named after Stephen Long” (Correspondence with J. L. Frazier, August 31, 1961).
fragments of greenstone. Descending, towards evening, into a broad and deep valley, we found ourselves again immured between walls of grey sandstone, similar in elevation and all other particulars to those which limit the valley of Purgatory creek. It was not until considerable search had been made, that we discovered a place where it was possible to effect the descent, which was at length accomplished, not without danger to the life and limbs of ourselves and horses."

"Pursuing our way, along this valley," (James' narrative continues) "we arrived, towards evening, at an inconsiderable stream of transparent and nearly pure water descending along a narrow channel, paved with black and shapeless masses of amygdaloidal and imperfectly porphyritic greenstone. . . . From the very considerable magnitude of the valley, and the quantity of water in the creek, it is reasonable to infer that its sources were distant at least twenty miles to the west, . . ." Crossing the creek, they set up their tent in preparation for a thunder shower. Then, "after the rain, the sky became clear, and . . . the grassy plain, acquiring un­wonted verdure from the shower, . . . disclosed here and there a conic pile or a solitary fragment of black and porous Amygdaloid."

In a footnote James says, "From a subsequent comparison of the direction of several water courses which descend from this elevated district, we have been induced to consider the creek mentioned in the text as one of the most remote sources of the great northern tributary of the Canadian river." It seems virtually certain, however, that this stream was the Cimarrón River (or Dry Cimarrón, as it is more generally known today), as surmised by Thwaites. The geologists whom I have consulted on this point—Baldwin, Muehlberger, and Baltz—as well as Elmo Traylor, are unanimous in this identification. To these men, all the descriptive details given by James fit the Dry Cimarrón very well indeed

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60. James, Account, Vol. 2, pp. 81-82.
61. Ibid., p. 81.
—the gray sandstone formations similar to those on the Purgatoire, the deep, wide valley, the valley floor, described as a "grassy plain" with "conic piles" here and there, and the occurrence of basalt ("greenstone") in the stream channel. By contrast, James' description fits none of the several streams lying farther to the south, in the areas where they would have been crossed by the party’s southward line of march—Travesser Creek, the headwaters of the North Canadian (Corrumpa Creek), or Carrizo Creek. Southward from where Long's party must have been, all three of the latter streams are so small, shallow, and open as to be scarcely worthy of comment. Two of these—Corrumpa and Carrizo creeks—I have seen myself in company with Elmo Traylor, and he informs me that the third is also quite insignificant in the area where Long’s party would have encountered it.

Although the identity of this valley as the Dry Cimarrón thus seems quite clear, the exact route by which the party made its way to the valley is not. As mentioned previously, however, it was not via Long's Canyon. Several points of evidence support this assertion. Most convincing of all is the fact that whereas James described the stream channel as being paced with "greenstone" (i.e., basalt), the stream bed of the Dry Cimarrón at the confluence of Long's Canyon is not. Farther upstream, to the west, the stream channel is indeed paved with basalt, but this ends at the Cross L Ranch, according to Baldwin, some 5 or 6 miles above the mouth of Long’s Canyon. Obviously, this would argue for an approach farther upstream.

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63. East of the mouth of Tollgate Canyon, the valley of the Cimarrón opens out to a width of as much as two miles for the next four miles to the east, and is excellent grazing land today, according to Muehlberger.

64. These could be knobs of the basalt flows which have not been buried by the recent alluvial fill, according to Muehlberger.

65. See Baldwin and Muehlberger, op. cit., Plate 1b. Elmo Traylor was aware of these facts, also, and on September 14, 1960, he showed me this difference in the stream channel of the Dry Cimarrón near the mouth of Long's Canyon, as contrasted with the mouth of Tollgate Canyon, about 15 miles upstream.

66. Baldwin, Muehlberger, and Traylor are all of the opinion that Major Long’s line of approach to the Dry Cimarrón could well have been Tollgate Canyon, some 15 miles upstream from the mouth of Long’s Canyon, or possibly the small (unnamed) canyon ca. 1 mile downstream from Tollgate.
Another point, mentioned previously, which argues against Long's Canyon, is the sheer, precipitous nature of the canyon walls that rim the upper reaches of this canyon and its forks. According to Elmo Traylor it is a virtual impossibility to descend off the plain into the upper reaches of Long's Canyon with horses. Indeed, according to Traylor, prior to the construction of a road up the canyon and onto the plain, the ranchers with holdings in the canyon had never had to erect fences to keep their cattle from straying onto the plain above. There is no place where cattle can enter and leave the upper reaches of the canyon!

Traylor makes another point which seems cogent. If Long's Canyon had been their route to the Cimarrón, in proceeding southward the next day (as the party did), they would have struck Travesser Creek (the next stream to the south) where it is a deep canyon and very difficult to cross with horses. Southward from Tollgate Canyon, however, Travesser Creek is so shallow and small as to pose no problem whatever. In James' account of the following day there is no mention of their having crossed any difficult canyon.

Still another point against Long's Canyon is this: in the afternoon before arriving at the Cimarrón, the party crossed "several extensive valleys." Had their route been south from the Mesa de Maya to Long's Canyon, and down it, this statement would seem puzzling indeed, for no valleys of any sort would have lain across their line of march. On the other hand, if they had swung westward that morning to the vicinity of Nigger Mesa (as we have previously postulated), a subsequent course "a little east of south" would have led them across the valleys of the westernmost headwaters of Long's Canyon. Thus, James' statement would have had some meaning.

67. See A. M. S. Map, "Dalhart" (Western U. S. Series, 1:250,000).
68. This is negative evidence, of course.
69. See Baldwin and Muchberger, op. cit., Plate 11-B, which shows a view of this region.
It would seem, therefore, that Major Long's party probably approached the Cimarrón via Tollgate Canyon, or possibly the next small canyon to the east. They could have descended into upper Tollgate Canyon in a number of places, according to Traylor, although not without some difficulty. Either of these canyons would have exhibited "walls of grey sandstone, similar in elevation and all other particulars to those which limit the valley of Purgatory Creek" (as would Long's Canyon, also, it must be admitted). At the mouth of either of these canyons the party would have encountered dark volcanic rock (the "greenstone" mentioned by James) in the stream bed of the Dry Cimarrón.

July 29

Starting out on a course S.35°E., the party arrived at the cliff bounding the south side of the valley at a distance of 3 miles from their camp. This "mural barrier" they found impassable "except at particular points, where it is broken by ravines. One of these we were fortunate in finding without being compelled to deviate greatly from our course, and climbing its rugged declivity, we emerged upon the broad expanse of the high plain." From the distance travelled and the direction of their course, as given by James, both Baldwin and Muehlberger are of the opinion that Brigg's Canyon was probably their avenue of exit from the valley of the Dry Cimarrón.

"Turning with a sort of involuntary motion towards the west," James continues, "we again caught a view of the distant summits of the Andes, appearing on the verge of our horizon. The scene before us was beautifully varied with smooth valleys, high conic bills, and irregular knobs, scattered in every direction as far as the eye could comprehend. Among these singular eminences nothing could be perceived"
like a continuous unbroken range; most of them stand entirely isolated, others in groups and ranges, but all are distinct hills, with unconnected bases.\textsuperscript{73}

This is a very good description of the area around Folsom, north of Sierra Grande. It should not be inferred, however, that the party was in the midst of the country so described, or even that their line of march was in that direction. Rather, this is the view the party would have seen \textit{while facing to the west}, after leaving Brigg's Canyon. Their course during the day was evidently southward. This is the direction indicated on Major Long's map,\textsuperscript{74} although no direction is stated in James' \textit{Account}.

Two violent storms out of the northeast overtook and delayed the party during the day. Pelted by hail, chilled by the cold wind, and soaked by the rain, which continued till dark, they finally halted and set up their small tent. Wet, half-frozen, hungry, and fatigued, they piled under it without benefit of dry clothing or blankets, food or fire, and, James' narrative continues, "We spent a cheerless night, in the course of which Mr. Peale\textsuperscript{75} experienced an alarming attack of a spasmodic affection of the stomach induced probably by cold and inanition. He was somewhat relieved by the free use of opium and whiskey."\textsuperscript{76}

The distance travelled is not stated, but was perhaps 17 miles, slightly less than the 20 miles presumed by Chittenden.\textsuperscript{77} The reason for my estimate will be explained farther on. From the direction of their route, they should have passed just to the east of Sierra Grande. Hence, their camp of this evening would have been off the east flank of this mountain, probably toward the southeast corner of T.29N., R.29E.

\textit{July 30}

Arising at an early hour, they continued on their way,

\textsuperscript{73} James, \textit{Account}, Vol. 2, p. 82.
\textsuperscript{74} "Map of the Country drained by the Mississippi," in James, \textit{Account}.
\textsuperscript{75} Titian Ramsay Peale (1800-1885), assistant naturalist and artist of the expedition.
\textsuperscript{76} James, \textit{Account}, Vol. 2, pp. 83-84.
\textsuperscript{77} Chittenden, \textit{op. cit.}, Vol. 2, p. 582.
“traversing a wide plain strewed with fragments of greenstone, . . .”78 In all probability this was the basalt-covered plain southeast of Sierra Grande. Then, according to James, “We arrived in the middle of the day, in sight of a creek, which like all watercourses of this region, occupies the bottom of a deep and almost inaccessible valley; with the customary difficulty and danger, we at length found our way down to the stream, and encamped.”79 The entries in James’ Diary for this day and the next create a slightly different picture, however. On this day, July 30, the party “arrived in the afternoon at a small stream which we supposed to be a branch of Red River and encamped for the remainder of the evening.”80 This impression of a small stream is modified somewhat by his diary entry of July 31: “Our last encampment was in a deep and narrow ravine worn by a small creek in a horizontal bed of greenstone trap” (i.e., basalt).

James’ Account continues: “The valley in which we halted is narrow, and bounded on both sides by cliffs of greenstone, having manifestly a tendency to columnar or polyedral structure. . . . The stream . . . which was now dry, runs toward the southeast. Having arrived at the part of the country which has by common consent, been represented to contain the sources of the Red River of Louisiana, we were induced by the general inclination of the surface, and the direction of this creek to consider it as one of those sources, and accordingly resolved to descend along its course. . . .”81

This stream, which Long’s party followed down to the Canadian River during the next 5 days, has been thought by most authors to be Major Long’s Creek82 (more commonly

78. James, Account, Vol. 2, p. 84.
79. Ibid.
80. James, Diary.
designated on maps by its local names: in New Mexico, Tramperos Creek, or, on its lower reaches east of the Texas-New Mexico state boundary, Punta de Agua). A combination of geological and topographic features recorded in James' Account, however, indicates that it was Ute Creek without much doubt, and rules out other streams of this region, including Major Long’s Creek. This evidence will be discussed in detail later.

The party probably struck Ute Creek in the southwest part of T.24N., R.29E., in Brewster Baldwin’s opinion. This would be in the neighborhood of three miles downstream from where it crosses U. S. Highway 56. For one thing, basalt occurs on both sides of Ute Creek here, and for a short distance above and below this point (the total distance being little more than a mile). Downstream from this area, basalt occurs on only one side (the southwest side) of Ute Creek, and then only sporadically. In addition, Ute Creek has essentially vertical walls here (although less than 100 feet high), so that it would indeed have been difficult for Long’s party to make their way down to the stream. Upstream from this area, Ute Creek soon becomes quite open and shallow, and thus would not fit James’ description.83

The distance travelled by the party on July 30 was probably about 30 miles, for in James' Diary on this date he mentions “the ride of about 30 miles across the dividing ridge.” The total distance from their camp of July 28 on the Dry Cim-

83. Mr. James E. Gallagher, formerly Postmaster at Bueyeros (some 25 miles farther down Ute Creek, in Harding County), a long-time resident of this area, quite independently expressed the same general opinion as Baldwin. From James' Account, Gallagher singled out this portion of upper Ute Creek, lying between Highway 56 and Road 120 as the area where Long’s party struck the stream. According to Gallagher, this segment is known locally as “Black Canyon.” (Interview with James E. Gallagher at Bueyeros, September 13, 1960.)

I have subsequently (September 8, 1962) seen this area myself. Along this short stretch of the canyon the low, vertical cliffs create a barrier virtually impassable to horses. Both upstream and downstream from this area, however, one can easily descend to the stream.
arrón to the point where they struck Ute Creek is approximately 47 miles. Hence, the distance travelled on July 29 would have been only about 17 miles, as previously mentioned. They evidently crossed the Don Carlos Hills en route, for this east-west oriented chain of low volcanic hills would have been the only "dividing ridge" lying across their line of march.

_July 31_

Unable to proceed down the creek because it was so obstructed by fragments fallen from the basalt cliffs above, the party "ascended into the plain, and continuing along the brink of the precipice, arrived in a few hours at a point where the substratum of sandstone emerges\(^8^4\) to light, at the base of an inconsiderable hill. It is a fine gray sandstone . . . remarkably contrasted to the massive and imperfectly columnar greenstone, which it supports."\(^8^5\)

"At one o'clock," James continues, "we arrived at the confluence of a creek, tributary from the east to the stream we were following, and descending into its valley, by a precipitous declivity of about four hundred feet, encamped for the remainder of the day. This valley is bounded by perpendicular cliffs of sandstone, surmounted by extensive beds of greenstone."\(^8^6\) Their camp of this day would have been in the northeast part of Section 13, T.22N., R.29E., and the distance travelled about 12 miles. Baldwin points out that here the "extensive beds of greenstone" are only on the southwest side of Ute Creek.

_August 1_

The party remained in camp and rested.

_August 2_

At sunrise they resumed their journey down the valley.

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84. According to Baldwin, this is the Dakota formation, and this location is in the northwest corner of T.23N., R.29E. (See Baldwin and Muehlberger, _op. cit._, Plate 1 c).
86. _Ibid._, p. 87.
their course being south, 30° east.87 "At the distance of two or three miles we found the valley much expanded in width, and observed a conspicuous change in the sandstone precipices, which bound it. This change is the occurrence of a second variety of sand-rock, appearing along the base of the cliff, and supporting the slaty argillaceous stratum above described. . . . The lowermost or red88 sand-rock, is here very friable and coarse."89

"On entering the wider part of the valley," James continues, "we perceived before us, standing alone in the middle of the plain, an immense circular elevation, rising nearly to the level of the surface of the sandstone table, and apparently inaccessible upon all sides. . . ."

"Leaving this we passed three others in succession, similar in character, but more elevated and remarkable. [Of one of them, Mr. Peale has preserved a drawing.]90 After passing the last of these, the hills ceased abruptly, and we found ourselves once more entering on a vast unvaried plain of sand. The bed of the creek had become much wider, but its water had disappeared. . . . Some fragments of amygdaloid were strewed along the bed of the stream, but we saw no more of that rock."91

Let us consider now the evidence on which we have based the opinion that this stream which Long's party was following was Ute Creek rather than Major Long's Creek (or any other watercourse of this region).

87. In the London edition of James' Account this is the direction given; in the Philadelphia edition it is given as "south, 80° east."

88. According to Elmer Baltz, this red sandstone is probably the upper part of the Chinle Formation of Triassic age, which is capped by lighter colored sandstone of the Entrada Formation. Here, as on the Purgatoire, a casual observer probably would not differentiate the two.

According to Baldwin, this location where the party first encountered the red sandstone would be in the southwest corner of T.22N., R.30E. (See Baldwin and Muehlberger, op. cit., Plate 1 c). James' first observation fits very well also; the rather abrupt widening of the valley of Ute Creek is evident here on A.M.S. Map, "Dalhart," about 2 miles upstream from the southern boundary of this township.


First of all, Major Long's Creek (Tramperos Creek) is ruled out unequivocally by James' repeated mention of "greenstone" (basalt\textsuperscript{92}) along this stream. For example, at their first camp (July 30) James commented on the "cliffs of greenstone, having manifestly a tendency to columnar or polyedral structure." There is no columnar basalt nor, indeed, any other volcanic formations to be seen on the Tramperos watershed\textsuperscript{93}—only sedimentary formations: shales and sandstones of the Graneros, Dakota Purgatoire, and Morrison formations.\textsuperscript{94} Carrizo Creek is also eliminated from consideration by James' observation (on Aug. 2) of the coarse red sandstone—the upper part of the Chinle Formation capped by the Entrada Sandstone. There are no exposures of this formation anywhere along Carrizo Creek. Also, James' observation (on July 31) of a tributary creek in a canyon about 400 feet deep would fit Ute Creek and its tributaries above Bueyeros, but not Carrizo Creek, which nowhere forms a canyon, nor has tributaries, of this magnitude. Furthermore, the direction of the stream in question, as stated by James, was toward the southeast, or somewhat south of that (e.g., south 30° east, on Aug. 2), which fits the Ute Creek but not Carrizo. The latter stream trends much more in an easterly direction—in general, approximately east-southeast. In fact, in several portions its direction is actually toward the east (in T.24N., R.33E.; T.23N. R.36E.; and the last 13 miles above its junction with Rita Blanca Creek).\textsuperscript{95}

Another highly significant point is James' mention of the "immense circular elevations" rising from the valley floor. These must be the conspicuous buttes which occur in the valley floor of Ute Creek a few miles west and slightly north of present-day Bueyeros, in Harding County. None of the geologists I have consulted, nor Elmo Traylor, know of another valley in northeastern New Mexico in which four conspicuous

\textsuperscript{92} There can be no doubt that James used the term "greenstone" to signify basalt; see his Account, Vol. 2, pp. 401-402.

\textsuperscript{93} Baltz, Baldwin, and Muehlberger are unanimous and positive on this point.

\textsuperscript{94} See Baldwin and Muehlberger, op. cit., Plate 1c.

\textsuperscript{95} See A.M.S. Map, "Dalhart," for these details of magnitude and direction.
buttes occur in the valley floor within the space of two or three miles.

From James' mentioning that Titian Ramsay Peale had made a sketch of one of these buttes, it was felt that if Peale's sketch could be located it would be a relatively simple matter to compare it (or a photograph of it) with the buttes in Ute Creek. If, then, a close correspondence were found between this sketch and one of the buttes, this would be virtually incontrovertible evidence that Ute Creek was, indeed, the stream Long's party descended to the Canadian. A search was thus inspired, which, although lengthy, ultimately bore fruit. It was determined that many of Peale's sketches from the expedition are now in the library of the American Philosophical Society of Philadelphia. In response to an inquiry, Mr. Murphy D. Smith, Manuscripts Librarian at this institution, reported as follows: "We do have a major collection of papers of the Peale family here in the Library. However, I could not locate the sketch, made by Titian Ramsay Peale about which you wrote. The Peale family papers are still scattered and we occasionally acquire additional items."

The writer then sent a series of photographs of the buttes to Mr. Smith, requesting that he check Peale's sketches again. Mr. Smith very kindly complied, and this time, with the photographs for comparison, was able to single out one sketch of Peale's—a picture of a black tail deer in the background of which is a depiction of a butte which is indeed similar in a general way to those in the photographs. The writer subsequently visited this area (September 7, 1962, accompanied by Dr. Loren D. Potter, Department of Biology, University of New Mexico), and experienced little difficulty in identifying the particular butte which Peale had sketched (see Figs. 2 and 3). Of the four, it proved to be the one

97. Correspondence with Murphy D. Smith, January 2, 1962.
98. Kindly supplied by Dr. Charles J. Mankin, Department of Geology, University of Oklahoma.
farthest upstream—the one the party would have encountered first. It lies in the south half of the northwest quarter of Section 28, T.21N., R.30E., in Harding County. The fact that the butte occurs on a sketch of the black tail deer has special significance. According to James’ Account, “though several had been killed, none had been brought to camp possessing all the characters of the perfect animal. Supposing we should soon pass beyond their range, a reward had been offered to the hunter who should kill and bring to camp an entire and full-grown buck.”

“Verplank killed one of this description, on the afternoon of the 1st of August, near enough our camp to call for assistance, and bring it in whole. They did not arrive until dark, . . . and a drawing [was] made by Mr. Peale, the requisite light being furnished by a large fire.”99 The very next morning, August 2, was when the party passed the buttes. What would have been more natural than for Peale to have added a few details of the landscape to impart an authentic touch to the background of the sketch he had made just the night before?

James’ other observations of the morning of August 2, which I have mentioned previously—both the physical features and the sequence in which he noted them—all fit Ute Creek: the valley broadening out from a narrow canyon a few miles above the buttes and the red sandstone appearing at the base of the cliffs, the appearance of the buttes themselves, the valley then becoming a broad, flat, sandy plain, and the petering out of the volcanics. Thus, there can be little doubt concerning the identity of the stream the party was following.

The view that the party’s route followed “Major Long’s Creek” may possibly have originated in the widely known 1857 map of Lieut. G. K. Warren.100 This map shows the

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100. “Map of the territory of the United States from the Mississippi to the Pacific Ocean, ordered by the Hon. Jeff’n Davis, Secretary of War to accompany the Reports of the Explorations for a Railroad Route . . . compiled . . . by Lieut. G. K. Warren . . . in . . . 1854-5-6-7.” This is one of the number of maps included with Vol. 11 of the Pacific
route of Major Long’s party striking an unnamed tributary of the Canadian and proceeding southward along it to the Canadian itself. To the west, the next major tributary is named “Utah Creek.” This map, in other respects highly authoritative,\(^{101}\) thus established (or perpetuated) an error in the route followed by Major Long which has been repeated by the great majority of later cartographers and historians. Although unnamed on Warren’s map, the course of this tributary and its position relative to Ute Creek (Utah Creek) leave little doubt that it is Major Long’s Creek.

The association of Long’s name with that particular water-course, however, probably dates from Henry S. Tanner’s “Map of North America” of 1822.\(^{102}\) This great cartographic achievement, which incorporated the geographic findings of Long’s expedition, indicates that the party followed down a major tributary of the Canadian, which on this map is named “Trace Creek.”\(^{103}\) To the east, the next major tributary is named “Long’s Fork.” Major Long’s route is not indicated as following this stream, however, and why the latter should have been chosen to commemorate his name is not clear. Thus, Tanner was evidently the first to apply Long’s name to the stream which still bears it, but at the same time was aware that it was not Long’s route to the Canadian. There would seem to be little doubt that “Trace Creek” of Tanner’s map is Ute Creek, by virtue of its position relative to “Long’s

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102. A portion of Tanner’s map is reproduced in Carl I. Wheat, *Mapping the Transmississippi West, 1540-1861* (San Francisco, 1958), Vol. 2, facing p. 81. According to Wheat (op. cit., p. 82) the copy in the Library of Congress bears the date 1822, which was actually before the account of Long’s expedition was published. Apparently the same map was published in sections in Henry S. Tanner, *New American Atlas* (Philadelphia, 1823); the region with which we are concerned is in Map 10.

103. A name probably derived from the Indian “road” or “trace” which followed along lower Ute Creek, and which Long’s party followed down to the Canadian (as explained farther on).
LONG'S ROUTE 215

Fork," and the large Indian "trace" from which its name is probably taken.

Long's route is also correctly shown on Josiah Gregg's map of 1844,104 as descending the "Arroyo de los Yutas." Major Long's name is not applied to any of the tributaries of the Canadian to the east, but there can be little doubt that Gregg's "Arroyo de los Yutas" is, in fact, Ute Creek. Its confluence with the Canadian is shown as being approximately 22 miles northeast of a "Cerro de Tucumcari." (This is quite accurate—Ute Creek joins the Canadian slightly more than 19 miles northeast of Tucumcari Mountain105).

Other maps of this period purporting to show Major Long's route are usually less accurate in this matter than Gregg's (see, for example, the maps by Smith, Fremont, and Gibbs, 1831; Burr, 1839; and Emory, 1844).106

Coming back to James' Account of August 2, although no distance is stated for their morning's march, Brewster Baldwin's knowledge of the valley of Ute Creek and the context of James' Account lead him to estimate 21 miles. In the afternoon, according to James, they travelled 13 miles.107 The total distance covered that day—34 miles—would place their camp of this evening approximately 11 1/2 miles above the junction of Tequesquite Creek.

August 3

"Little delay was occasioned by our preparations for breakfast" (James' Account begins). "The fourth part of a biscuit, which had been issued to each man on the preceding evening, and which was to furnish both supper and breakfast, would have required little time had all of it remained to be eaten, which was not the case. We were becoming somewhat impatient on account of thirst, having met with no water which we could drink, for near twenty-four hours. Ac-

105. As determined from A.M.S. Map, "Tucumcari" (Western U. S. Series, 1:250,000).
106. Reproduced in Wheat, op. cit., facing pages 128, 167, and 184, respectively.
Accordingly getting upon our horses at an early hour, we moved down the valley. . . ." 108 The distance travelled is not recorded for this day in James' Account. In his Diary, however, James states, "Our journey yesterday and today a distance of about 60 miles has been along the bed of a subterranean branch of Red River. . . ." Hence, if we subtract their distance of 34 miles on the preceding day from 60, the remainder would be about 26 miles. Their actual distance travelled, however, was probably nearer 30 miles, and their camp of this evening was probably about 21-22 miles above the junction of Ute Creek and the Canadian. The reason for these estimates will be explained below.

August 4

The party continued down Ute Creek and, according to James' Diary, "Our morning's march of about 16 miles has brought us to a place where the water of the river emerges from the sand and runs above ground in a stream of considerable magnitude." This is slightly different from his statement in the Account, where he comments that "The stream was still very inconsiderable in magnitude. . . ." 109 Be that as it may, it seems quite likely that this location was on Ute Creek in the extreme southern part of present-day Harding County, for here, 5 to 6 miles above the junction with the Canadian, are several springs on the bank, and running water in the stream bed of Ute Creek. 110

The total distance James estimated they had travelled from their camp of August 1 corresponds very closely to the actual distance they must have covered, as I compute it. Using a millimeter scale, I measured the distance on the most

108. Ibid., p. 93.
109. James, op. cit., p. 94.
110. For this information I am indebted to Mr. Zane Spiegel, geologist at the New Mexico Institute of Mining and Technology, Socorro, who has detailed knowledge of lower Ute Creek, and of the Canadian from the confluence of Ute Creek to the Texas line.

James' further statement that the water was "excessively turbid" suggests that at least some of it was surface runoff from storms in the area. Since this could have come from other sources, the beginning of stream flow noted by the party is not necessarily to be equated with the location of the springs; it is, however, distinctly suggestive.
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accurate maps\textsuperscript{111} at my disposal, from the probable site of the party's camp of August 1 on Ute Creek, to the junction of this stream and the Canadian River. Taking into account most of the sinuosities—ignoring none but the most minute—I computed the distance to be slightly over 85 miles. The distance estimated by James (60 miles on August 2 and 3, plus 16 miles on the morning of August 4) plus the 5 or 6 miles from the beginning of stream flow to the junction with the Canadian, gives a total of 81 or 82 miles—a remarkably close correspondence.

Continuing on their way, the party must have come upon the Canadian before the end of the day. It is apparent, however, that they did not immediately appreciate this fact, although they were not long in coming to this realization. (Their itinerary, as shown on Major Long's map,\textsuperscript{112} indicates that they arrived at the Canadian on August 4). for one thing, there is no mention in either James' \textit{Diary} or \textit{Account} of any junction of the creek they were following with a larger stream. For another thing, there is a tone of uncertainty in the entry in James' \textit{Diary} on August 5 that seems rather puzzling. On the 4th, after describing the stream flow they had encountered in Ute Creek that day, James remarked, "The general direction of its course inclining still towards the southeast, we were now induced to believe it [the stream they were on—Ute Creek] must be one of the most considerable of the upper tributaries of Red River."	extsuperscript{113} However, in his \textit{Diary}, the entry for the next day, August 5, reads in part as follows: "For two or three days we have been travelling on a large and apparently much frequented Indian road. . . . This and other circumstances induce us to believe that we are now on the main Red River and not on one of its branches as we had at first supposed. . . ."\textsuperscript{114}

There would seem to be only one logical explanation—the

\begin{itemize}
  \item \textsuperscript{111} A.M.S. Maps, "Dalhart" and "Tucumcari."
  \item \textsuperscript{112} In James, \textit{Account}.
  \item \textsuperscript{113} James, \textit{Account}, Vol. 2, p. 94.
  \item \textsuperscript{114} James, \textit{Diary}.
\end{itemize}
party must have missed the actual junction of Ute Creek and the Canadian. Lower Ute Creek is in a deep canyon and enters the Canadian almost at a right angle. The Canadian is much wider and is obviously a river—not a creek. It also flows in a vertical-walled canyon which here averages more than 100 feet in depth.\(^{115}\) Thus, had Long and his party followed Ute Creek all the way to its mouth, they could not possibly have missed the junction, and there would have been no occasion for their remarks indicating uncertainty. One must assume, therefore, that the Indian “road” or “trace” the party had been following veered to the east away from Ute Creek at some distance above the junction, and cut across diagonally to the Canadian. Thus, the party could have lost sight of the one stream for a few miles, missed the junction completely, and then come upon the Canadian without immediately realizing they were on a different stream. By the time they had followed the latter for a day or so, however, this had no doubt become apparent to them from the large size of the valley, the consistent stream flow, and the generally eastward—rather than south to southeastward—direction of the stream.

Finally, James’ description of their journey down the Canadian during the first several days after leaving Ute Creek, confirms the view that their route to the Canadian had indeed been via this creek rather than “Major Long’s Creek.” As a single specific point one could mention the difficult terrain crossed by the party on the morning of August 8. James described steep and rocky ravines, the meandering course of the Canadian, “winding about the points of rocky and impassable promontories,” the conditions being so difficult that they had to cross and re-cross the river several times in order to proceed downstream. According to Spiegel, James’ description applies to the area where the Canadian crosses the Matador Uplift in western Oldham County, Texas, a few miles east of the present New Mexico line. The con-

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\(^{115}\) These descriptive details of the confluence of Ute Creek and the Canadian River have been supplied by Zane Spiegel. (Correspondence with Z. Spiegel, December 15, 1961.)
ditions James described are simply not repeated below the junction of “Major Long’s Creek.” In Spiegel’s opinion, moreover, there is a close resemblance of the geographic details in James’ entire Account for the days from August 4 to 10 to the geography of the Canadian River from Ute Creek to Tascosa, in Oldham County, Texas (a few miles east of the confluence of “Major Long’s Creek”). This, then, is further evidence that the party’s southward journey to the Canadian could not have been via “Major Long’s Creek.”

Thus ends this attempt at elucidating one segment of Major Long’s route. In years to come, ever more searching analysis will doubtless clarify other details which are as yet obscure. A signal contribution could be made by a team of cooperating specialists—a historian, a geologist, and perhaps a botanist—critically evaluating all pertinent observations from the available records. An attempt to use such data in the field in retracing the route of Major Long’s expedition would go far toward resolving those parts that are still obscure or controversial. Only in this way can the definitive treatment be written.