The Pictorial Record of the Old West

XIV. ILLUSTRATORS OF THE PACIFIC RAILROAD REPORTS

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JANUARY 1, 1850, opened the new year auspiciously in New York City. The day was clear and mild, New Year’s parties were numerous and gay as the socially minded hurried from one hostess to the next, getting mellower as the afternoon advanced. For those not socially inclined Barnum’s American Museum could be visited; or one could attend a special afternoon performance of Christy’s Minstrels, “The first to harmonize Negro melodies”; or moving panoramas, huge painted canvases that slowly passed before the seated audience, enabled the New Year’s day visitor to pass away an hour or so as he viewed the noble Hudson or the ancient Nile, or the Astor House riot of the previous year.

On that same day, Horace Greeley, one of the leading editors of his time, was to write in the Tribune “1850 will complete the most eventful half century recorded in history. The coming year is pregnant with good for all Humanity, and so must be a happy one.”

As the year commenced in Washington, however, there were signs that all was not happiness and light. The two houses of congress convened for the first time in the new year on January 3. The house immediately got into a wrangle over the election of its officers. It took 20 ballots to elect a clerk of the house and earlier, 63 ballots had been required to elect a speaker.1 Sectional differences between Northern and Southern members governed every action and the seeds of discord were being lavishly sown.

In the senate, on its opening day of the year, Senator Henry S. Foote of Mississippi notified his colleagues that “on Monday next” he would ask their consideration of a resolution asserting the expediency of establishing a territorial government for California, Deseret and New Mexico. Foote began the discussion of his reso-

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1. The Congressional Globe, 31 Cong., 1 Sess. (1849-1850), pt. 2, pp. 94-138. The election of the speaker was completed on December 22, see p. 66 of above reference.

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olution on January 16. It provided not only for the organization of territorial government in California, Deseret (Utah) and New Mexico, but it also included a clause which would have established, with the consent of Texas, a new state, Jacinto, to be formed from the eastern third of Texas.

Senator Foote's proposal was, of course, based on the competing claims of free and slave states but failed to muster sufficient support. President Zachary Taylor, however, in a message to the house on January 21, reported that he had recommended to both California and New Mexico that they prepare state constitutions and submit them to congress together with "a prayer for admission into the Union as state[s]."

The final action taken by congress as a result of all this agitation was to admit California as a state on September 9, 1850, and to organize New Mexico and Utah as territories on the same day.

As this discussion suggests, the American West of 1850 was a vastly different country from the West of today. True, in many respects, it is physically the same, but socially and geographically, and from the standpoint of numbers and material development, it has greatly changed. In fact, if we take the first of the year 1850 as our point of measurement, the entire West at that time was scarcely more than embryo, an outline only faintly suggestive of the changes to come. West of the Mississippi there were but five states when the year began: Texas, Louisiana, Arkansas, Missouri and Iowa. In these five states, according to the census of 1850, lived over 90% of all the inhabitants of the West. But all the inhabitants of the West in 1850 made up a population that numbered some two million souls, not many more than the population of present day Kansas. Even in California, which as we have pointed out, was admitted as a state during 1850, the population recorded was a scant 93,000. Fifty-eight thousand of this number claimed they were miners and only 7,000 "females" could be found within its border by the takers of the census!

With the exception of Texas, there were, in 1850, no Plains states. For the spread of plain and prairie, of hill and upland which now makes up many of our states was included in a huge realm that stretched from the northern border of Texas to the southern border of Canada. It had no name save "unorganized territory"; but in speech and writing it was usually called "The Indian Country."

2. Ibid., pt. 1, p. 97, and pp. 168-171 where the boundaries of the state of Jacinto are defined.
3. Ibid., p. 195.
A century ago there were, perhaps, a dozen or so struggling colleges in the states beyond the Mississippi with students numbering less than a thousand. But most surprising of all to many of us, in comparing the West of a century ago with the West of the present, is the fact that in 1850 there was not one mile of railroad beyond the Mississippi, although there were some eight thousand miles of track in the states east of the Mississippi.4

Not that railroads were unthought of for the region beyond the Mississippi! As a matter of fact one student, after an extensive consideration of the problem, concluded that by 1850 the idea of a transcontinental railway was firmly established and that “both in Congress and out, it is clear that the construction of a railway to some point on the Pacific coast was generally accepted as a work of the near future by the close of the first half of the nineteenth century.”5

The rapid growth of California, of the Oregon country, the establishment of the “New Mormon settlement by the Great Salt Lake, beyond the Rocky Mountains” had convinced many that the Far West of the 1850’s was “now on the golden shores of the Pacific.”6

Communication to and defense of the Western shores and intermediate points were matters forming the basis for arguments in favor of railroad construction. War with England or France would cause loss of California and Oregon, one interested group pointed out in a memorial to congress.7 As for more rapid communication

4. Admittedly the census figures of 1850 are none too reliable but they are, in fact, all the data that are available to us. The figures on population above were secured by adding those of the various Mississippi states and territories as reported in The Seventh Census of the United States: 1850 (J. D. B. De Bow, Washington, 1853), p. xciii as follows: Arkansas, 209,897; California, 92,397; Iowa, 192,514; Louisiana, 517,762; Minnesota Territory, 6,077; Missouri, 682,644; New Mexico territory, 61,547; Oregon territory, 13,294; Texas, 212,592; Utah territory, 11,380; total, 1,999,404. The California population was undoubtedly shifting and changing too rapidly to enable anything approaching an accurate count. The National Intelligencer, Washington, D. C., January 14, 1851, p. 9, points out that California claimed a population of 200,000, but there were “actually only about 117,000 reported.”

In Henry V. Poor, Manual of the Railroads of the United States for 1868-69 (New York, 1869) there is a table, “Progress of Railroads in the United States” (pp. 20, 21), which indicates that the only state west of the Mississippi that had any railroads in 1849-1850 was Louisiana, which is credited with 80 miles of track in both 1849 and in 1850. Although I have not determined with certainty the company which owned this trackage, it was probably the New Orleans, Jackson and Great Northern railroad, a company which resulted from the consolidation of two roads, one of which was incorporated in 1841 and the other in 1848 (see Edward Vernon, American Railroad Manual for the United States and the Dominion [New York, 1873], v. 1, p. 367). Further, however, this road ran west and north from New Orleans on the east side of the Mississippi and was therefore not in the trans-Mississippi West (see map in Vernon, cited above, “Railroad Map of the States of Arkansas, Louisiana and Mississippi”).

Poor, cited above, pp. 20, 21, gives the total railroad mileage in the United States and throughout the states east of the Mississippi, as 7,585 miles in 1849 and 9,021 miles in 1850.


7. Memorial of a committee appointed at a railroad convention held at Little Rock, Ark., on July 4, 1852.—Ibid.
with the country beyond the Mississippi, the need can best be shown by quotation of two contemporary accounts. A Panama newspaper article, reprinted on January 1, 1850, in a Washington paper, stated:

The mails which are now going up to San Francisco have been brought here by the indomitable perseverance of Capt. McLean from New York in sixteen days, will reach San Francisco in Forty Days—the shortest trip ever made. Glory enough for one day.

A dispatch from St. Louis (dated December 28, 1849) indicates the slowness and difficulty of travel on the Plains:

Mr. J. H. Kirkhead arrived in this city yesterday from a journey across the Plains. He left the city of Salt Lake, in company with thirty-five others, on the 19th of October. The party were not molested by the Indians on the route, nor did they meet with any accident. The snow on the Plains was very deep, or the party would have reached here several days sooner.

Small wonder, then, with communication to and from the West a matter of months, that there was a loud and insistent demand, backed by many in the East, for a better method of transportation.

The question was not, shall a railroad be constructed to meet this demand, but how and where? Which raised problems in turn that were complicated by inflamed sectional feeling, and by personal and commercial antagonisms.

How violent these antagonisms actually were, can be seen from the fact that when congress convened in 1853, practically the entire session was devoted to heated debate on legislation that would make possible the construction of a railroad to the Pacific. At least four bills were considered, all of which were amended or substituted, but none could secure sufficient support to insure its passage. As a result of the extended and partisan debates in congress, interest in a Pacific railway throughout the country reached a fever heat and congress, no doubt painfully aware that some progress on the question must be made, finally approved a measure that appropriated $150,000 for a survey of possible routes that a railroad could successfully follow to the Pacific.


11. Ibid., ch. 7, discusses the work of this session of congress (the 32 Congress, 2 Session) on the Pacific railroad problem in some detail.

Probably there were few topics in congress that were discussed in more detail and at greater length during the 19th century than that of a railroad to the Pacific. Beginning in the 1840's and extending up to 1864 when Federal legislation was finally enacted that made possible the beginning of Pacific railway construction, there are literally hundreds upon hundreds of references in the indexes of The Congressional Globe to discussions in the halls of congress upon this subject. When one realizes that each such reference may reveal a speech
In this measure, congress instructed army engineers to carry out the work involved in such surveys and it fell to Jefferson Davis, secretary of war in the cabinet of President Franklin Pierce, to draw up the general plans for the surveys. Four general routes to the Pacific had been under consideration from time to time in public and congressional discussions:

(1) A southern route beginning at a point on the Red river of eastern Texas and extending westward somewhere near the Texas-Mexico border; frequently called the 32nd parallel route.

(2) A route beginning at Fort Smith, Arkansas, and extending westward through present Oklahoma, New Mexico and Arizona to California; frequently called the 35th parallel route.

(3) A central route beginning either at Kansas City, Missouri, or Council Bluffs, Iowa, and extending westward to California through the Central West.

(4) A northern route beginning at St. Paul, in the newly organized territory of Minnesota and extending north and west and terminating at Seattle in Washington territory.

Actually some six surveys were at work on parts of these and alternate routes in the period 1853-1854. The plan for the surveys was comprehensive in scope. Not only were the individual surveys instructed to examine carefully the country through which each passed with a view of establishing feasible routes for railroads but the nature of the country as revealed by its climate, by its geology, by its plants and animals and by the character and degree of development of its native inhabitants were to be observed and recorded. All such facts would be of value in making an estimate of the ability of the country through which a railroad might pass to support a population which would naturally be expected to come with the railroad.

To further these ends, each survey party included among its group, in addition to surveyors and civil engineers, geologists, botanists, zoologists, naturalists, astronomers, meteorologists, artists, physicians and topographers. In order to reduce the size of the personnel, a number of the members of each party served in dual capacities. Even so, since in addition to the scientific personnel, cooks, teamsters and assistants had to be provided as well as a military escort—a very necessary addition as we shall see—the individ-

of considerable length, these references mean hundreds of pages of actual discussion. For example, Sen. Jeff Davis of Mississippi has a speech running to ten pages (appendix to The Congressional Globe, 35 Cong., 2 Sess., pp. 277-287, January 20, 1859) on the subject. As each page of the Globe contains in the neighborhood of 5,000 words, the total volume of words upon the Pacific railroad in the Globe would constitute an extensive encyclopedia in itself.
ual parties at times assumed very considerable proportions. One could with difficulty imagine how more extensive the personnel of the surveys could have been made, but a congressman, after the surveys had been completed, complained that no practical railroad men—and he should have added capitalists—had been included among the individual parties.\textsuperscript{12}

Preliminary reports of all surveys were published from time to time, but the complete reports, with revisions and additions of the work of subsequent surveys, were published in a magnificent and comprehensive 12-volume work, \emph{Reports of Explorations and Surveys to Ascertain the Most Practicable and Economic Route for a Railroad From the Mississippi River to the Pacific Ocean}. These volumes, published by the federal government between 1855 and 1861, constitute probably the most important single contemporary source of knowledge on Western geography and history, and their value is greatly enhanced by the inclusion of many beautiful plates in color of scenery, native inhabitants, fauna and flora of the Western country. Ironically enough the publication of this monumental work cost the government over $1,000,000; the surveys themselves, $455,000.\textsuperscript{13}

These reports, invaluable first-hand sources for the historian of today, created tremendous interest at the time they were published. They were discussed in the newspapers, talked about in congress, in homes, on the street, and were reviewed at length in the contemporary magazines. \emph{The North American Review}, for example, one of the leading magazines for intellectuals of the 1850's, devoted over 25 pages to a review of these reports. The impression they produced can best be realized by quoting the editors of the \emph{Review}:

\begin{quote}
Before the accession of California, the western possessions of the United States were looked upon as a sort of fairy land basking under the influences of a most delightful climate, and enriched by the choicest gifts of nature. Gigantic herds of buffaloes, and troops of wild horses of comely proportions and unsurpassed fleetness, roaming at large over pastures whose verdure never paled, were said to meet the eye of the traveler at every turn. Plains of immense extent and unparalleled fatness lay at his feet, while ever and anon rich clumps of woodland, gentle flowing rivulets, invited him to shelter and repose. Farther on these become interspersed with hills and ravines, highly picturesque
\end{quote}

\textsuperscript{12} Appendix to \emph{Congressional Globe}, 35 Cong., 2 Sess., p. 288, January 11, 1859; the speaker was Sen. Henry Wilson of Massachusetts.

\textsuperscript{13} For a detailed bibliography of these reports see the appendix at the end of this article. Hereafter they will be cited simply as \textit{Reports}.

\textsuperscript{14} Russell, op. cit., ch. 11, gives a brief review of the surveys, and it is his estimate of the cost of surveys that I have used. The estimate of the cost of publication is based on a comment of Senator Harlan (see Footnote 16) who stated that the first nine volumes cost nearly $900,000. It seems reasonable to assume that the last three volumes would average at least $100,000 each (considering the large number of volumes 11 and 12 printed) which would bring the cost of printing up to $1,200,000 approximately.
in effect, terminated in the remote distance by the snow-clad elevations of the Rocky Mountains, which were again succeeded by gentle slopes of arable land, whose western limits were washed by the waves of the Pacific.

The report of the surveys tended to dispel these illusions, based as they were on a more accurate knowledge of the country than had before been available. In fact, the Review went so far as to state after studying the reports:

We may as well admit that Kansas and Nebraska, with the exception of the small strip of land upon their eastern borders, are perfect deserts, with a soil whose constituents are of such nature as for ever to unfit them for the purposes of agriculture, and are not worth an expenditure of angry feeling as to who shall or who shall not inhabit them. We may as well admit that Washington Territory, and Oregon, and Utah, and New Mexico, are with the exception of a few limited areas, composed of mountain chains and unfruitful plains; and that, whatever route is selected for a railroad to the Pacific, it must wind the greater part of its length through a country destined to remain for ever an uninhabited and dreary waste. 14

Despite all the information available in these reports—and all the discussion brought on by the 12 publications—mounting sectional antagonism was destined to prevent immediate decision on “the best” route to the Pacific. Not until the Civil War was well advanced was the actual work of construction undertaken and not until 1869 was the first of the Pacific railroads, that following the central route, completed. 15

We are here concerned, however, with the illustrations of these reports rather than the developments that led eventually to the construction of the road. Their value was early pointed out. Sen. James Harlan of Iowa, even before the entire set was issued, for example, called the attention of his fellow senators to these views. Speaking in the senate on January 6, 1859, he said:

But lest some Senators and members of Congress might not be able to read and comprehend them [the reports of the Pacific railroad surveys], they have been illustrated. Every unusual swell of land, every unexpected or unanticipated gorge in the mountains has been displayed in a beautiful picture. Every bird that flies in the air over that immense region, and every beast that traverses the plains and the mountains, every fish that swims in its lakes and rivers, every reptile that crawls, every insect that buzzes in the summer breeze, has been displayed in the highest style of art, and in the most brilliant colors. 16

Although the senator spoke with more eloquence than truth in describing the illustrations, they were—and are—truly wonderful.

14. The complete article from which the two quotations above are taken may be found in the North American Review, v. 82 (1856), January, pp. 211-236. It is based not on the final report, but the preliminary one, i.e., Serial Nos. 505 and 517.

15. For incidents on the completion of the railroad see No. 11 of this series, The Kansas Historical Quarterly, v. 18 (1950), May, pp. 113-139.

Large in size, pleasing in color and plentiful in number they have excited admiration for nearly a century; and—as the senator suggested—they conveyed a wealth of information about an unknown country in a language even the simplest mind could understand.

The illustrations, in the *Reports* which we shall consider, are the so-called “views”; these are of greatest general interest but it must be kept in mind, as indicated by Senator Harlan, that many scientific (geological, zoological, botanical) illustrations were also included. Many of the illustrations for the geological reports are woodcuts reproduced in the text and a few of these are of sufficient general interest to mention specifically as has been done later. The “views” are for the most part full-page lithographs and are printed in two or three colors on heavy paper, much heavier than the paper containing the text. Many are printed in brown and black, some in green and black and in still others, a third color, blue, has been added. The lithography was either a two-plate or three-plate printing process, as can be readily seen where the various color plates failed to register exactly in the successive printings. The lithography was done by A. Hoen Co. (Baltimore), J. Bien (New York), Sarony and Co. (New York) and T. Sinclair, Philadelphia.

The illustrators for the volumes, all of whom were members of the various survey parties, were 11 in number and included: John G. Tidball, Albert H. Campbell, Richard H. Kern, James G. Cooper, John M. Stanley, John Young, Gustav Sohon, F. W. Egloffstein, H. B. Möllhausen, W. P. Blake and Charles Koppel. Möllhausen’s part in the survey has already been considered in this series as has some of the work of Egloffstein.17

17. See No. 6 in this series.—The *Kansas Historical Quarterly*, v. 16 (1948), August, pp. 235-244.

Evidently because of the large number of plates required, the same illustration was occasionally lithographed by different firms. As a result, slight differences in views occur, as the lithography was all hand work. Impressions from the same stone vary also, depending upon the number of impressions made and the amount of ink present at a given impression. The crediting of illustrations to the original artist occasionally differs, too, in the different printings. Some of these differences, especially where there are regularities in differences, will be discussed in connection with special illustrations. Although most of the views are lithographs, an important exception occurs in connection with a group of 13 illustrations, by F. W. Egloffstein, in volume 11. This group is made up entirely of steel engravings and will be described in connection with the work of the artist.

Nearly all volumes that contain illustrations (views) have a “List of Illustrations” at the beginning of the section containing each group of views. These lists sometimes specify the artists and give the page numbers where the plates may be found. The plates, however, are not always listed as indicated and some even may be lacking from a given volume. In one volume examined, only seven of 14 illustrations listed were present and there was no indication that the plates had been removed, as no breaks in the back strip or torn stubs were apparent. Printed as they were on a large scale for their day, errors in assembling and binding produced variations in the pagination of the plates. It is true that occasionally one will come across a volume of these reports at the present day from which the plates have been removed but such a removal can usually be detected by a careful examination of the back strip and the specified page of insertion of an individual plate.

One further variation in connection with the plates may be noted. The titles of plates both in the lists of illustrations and the legends on individual plates will be found at times
Tidball, Cooper and Blake are represented by relatively few illustrations and their work needs only brief comment. 18

Tidball is clearly credited with three illustrations in the third volume of the official Reports and may be the original artist of two more. Lieutenant Tidball was a member of Lieutenant Whipple's survey along the 35th parallel and Tidball's illustrations depict a camp of the party on January 28, 1854, in present Arizona; the "Valley of Bill William's Fork" also in Arizona, the most interesting of the Tidball drawings, and the "Valley of the Mojave" in California. The last of these illustrations is a woodcut in the text of the report; the remainder are full-page lithographs. A fourth illustration depicting still another camp site of the party is credited in some printings of the report to Tidball and in others to Möllhausen. 19

Dr. Cooper is represented by not more than two views, both sketched in the Northwest on the Stevens survey. "Puget Sound and Mt. Rainier From Whitby's Island," is credited to Cooper in one printing of the report but in a second printing it is credited to J. M. Stanley. "Mount Rainier Viewed From Near Steilacoom" is credited in all printings that I have seen to Stanley "From sketch by Dr. Cooper." 20

William P. Blake was the geologist on Lieutenant Williamson's survey of two routes in southern California. Operations were begun in July, 1853, at Benicia, about 25 miles above San Francisco to differ in spelling, especially if the legend contains an unusual word. As a result of these variations one becomes cautious about making too definite statements concerning the illustrations in general; such observations are therefore of necessity confined to specific illustrations examined in a real copy.

18. Tidball (1825-1906) was an army officer who, like many of the profession of his day, had some training in sketching. As far as I know he is represented by no other illustrations save those included in the Reports. He later achieved a considerable reputation during the Civil War, see Dictionary of American Biography, v. 18, pp. 529, 530. Cooper (1830-1902), too, has no other illustrations save the two credited to him in the Report. Although a practicing physician he achieved his reputation as an amateur naturalist, see Dictionary of American Biography, v. 4, pp. 406, 407. Blake (1825-1910) achieved his reputation, too, as a naturalist and at one time was professor of mineralogy and geology in the College of California (later the University of California), and still later he became director of the School of Mines of the University of Arizona. He has no other illustrations, as far as I know, save those published in the Reports. For his career, see Dictionary of American Biography, v. 2, pp. 345, 346.

19. In the copies I have examined, "Bivouac, Jan. 28" will be found in v. 3 of the Reports, facing page 97. In some printings, the lithography is credited to Sarony, Major and Knapp (of New York) and in others is uncredited; the "Valley of Bill William's Fork" was found facing p. 102 in all copies of v. 3 examined, the lithography credited to either Sarony, Major and Knapp or to Sarony and Co.; the "Valley of the Mojave" was found in all copies on p. 59 of the "Report on the Geology of the Route"; the lithographs sometimes credited to Tidball and sometimes to Möllhausen "Bivouac, Jan. 28" was found facing p. 95 in all copies. The lithography in all cases was by T. Sinclair (Philadelphia); see, also, No. 6 of this series, p. 235. Four of Tidball's original sketches on sheets 9" x 6½" made on the Whipple survey have recently come to light.—See The Chronicles of Oklahoma, Oklahoma City, v. 28 (1950), p. 233.

20. In the Stevens report issued as "Supplement to Volume I" (Serial No. 992, 1859) the lithography of all plates was by J. Bien and in this volume (facing p. 263) is found the first illustration mentioned above and credited to "Dr. Cooper del." In the 1860 printing (v. 12, Book 1, Serial No. 1054) it is credited to Stanley, facing p. 289, the lithography by Sarony, Major and Knapp. The second illustration described above will be found facing p. 265 in the 1859 printing and facing p. 290 in the 1860 printing.
and the northernmost point of the survey. Much of the work of the survey was spent in the deserts of California and in the Sierra Nevada mountains. Charles Koppel was the official artist of the expedition and a number of his illustrations appear in Lieutenant Williamson’s report (volume 5 of the official Reports). Blake, however, had an extensive report in this volume on the geology of the country explored and his report is as extensively illustrated as is Williamson’s and included 13 full-page lithographs (views) and over 80 woodcut engravings in the text of the report.\footnote{In the index of “Illustrations” (pp. XIV-XVI of the official Reports, v. 5) 14 full-page plates are listed, three credited to Blake, one credited to Koppel after Blake, and the rest by Koppel. In all the volume five I have examined, however, Plate XIII of the list is missing and the plate that is numbered XIV in the list appears on the illustration itself as “Plate XIII.”}

All illustrations, of course, were meant to have special geologic significance but a number of both lithographs and woodcuts are of general interest as views. Of the full-page plates, three were drawn by Blake, and one was redrawn by Koppel from an original sketch by Blake. The most interesting of the Blake sketches reproduced as lithographs are “Sierra Nevada, From the Four Creeks” (Plate IV) and especially “Mirage on the Colorado Desert” (Plate XII). [The latter sketch is here produced facing p. 369.]

A number of the woodcuts, too, are of interest and over 70 of them were drawn by Blake. The better-drawn ones, however, were done by Koppel. Most of the woodcut illustrations, of course, are geological sections and the few of general interest drawn by Blake were outline sketches. Possibly of these Blake sketches the most interesting are “Mission of San Gabriel” (p. 78) and “San Diego From the Bay” (p. 129).\footnote{Blake also redrew a number of geological cross sections from original sketches by Jules Marcou in v. 3 of the official Reports.}

That the surveys were made with real hazards, in addition to those of travel in a mapless territory, is best illustrated by the tragic fate of one of its artists, Richard H. Kern. Kern, Captain Gunnison, in charge of the survey on the central route, J. Creutzfeldt, the botanist of the expedition, and five other members of the survey while detached from the main party were surprised and slain by Paiute Indians on October 26, 1853. Of this party of 12 which was ambushed, only four soldiers escaped.\footnote{Reports, v. 2, pt. 1, pp. 9, 10, 72-74. News of the massacre was received in the East with more than usual dispatch. It was first reported in the National Intelligencer, Washington, on December 3, 1853, p. 1, and in more detail on December 10, 1853, p. 3; see, also, the issue of February 21, 1854, p. 8.}

Kern was one of three brothers from Philadelphia who were active in explorations in the West in the middle 1800's, all of whom had sketching ability. Two were killed by Indians and the third
died at an early age, possibly as the result of extreme hardships suffered on at least one Western expedition. Dr. Benjamin Jordan Kern was the eldest of the brothers (born August 3, 1818). He was a member of Fremont’s ill-fated fourth expedition that left Westport on the Missouri river—Westport is now part of modern Kansas City—in the fall of 1848. The expedition attempted the crossing of the Colorado Rockies in the dead of winter, encountered such toil and starvation that 11 of 32 members of the expedition perished and the rest were barely able to make their way back to Taos in northeastern New Mexico. All three Kerns were members of the expedition and after returning to Taos, Dr. Kern and the celebrated Bill Williams, Fremont’s guide, returned to the mountains to secure notes, collections and equipment cached after their tragic retreat. They reached their cache but were treacherously slain on March 14, 1849, as they conversed with a party of Utes who had been defeated a few days earlier by U. S. troops.24

Edward Kern (born October 26, 1823), another member of the family, had been the artist on Fremont’s third expedition that left St. Louis in the summer of 1845, crossed the Plains and Rockies to Salt Lake City and then went on to California. Here he served as lieutenant in the U. S. army from July, 1846, to April, 1847, under Lieutenant Colonel Fremont. In addition to the Fremont fourth expedition, both Richard and Edward were members of a military expedition that left Santa Fe for the Navajo country in the summer of 1849. In the reports of this expedition, 72 lithographed plates (a number were colored) of Indians and scenery appear, and are credited to R. H. and E. M. Kern.25

24. Alpheus H. Favour, Old Bill Williams Mountain Man (Chapel Hill, N. C., 1896), chs. 4-16.
25. The report, generally referred to as the Simpson report, was published in 31 Cong., 1 Sess. (1849-1850), Sen. Ex. Doc. 64 (Serial No. 562). Most of the illustrations are credited to R. H. Kern, the lithography was by P. S. Duval, Philadelphia, and Ackerman, New York. Simpson (p. 56) expressed appreciation to the Kerns for their efforts on the illustrations and specifically pointed out that most of the views were made by R. H. Kern.

The last plate of the set is numbered 74 but Plates 2, 21 and 39 are lacking from the several copies of this report I have examined. Further, of the 71 plates thus actually present, a number are illustrations of designs on fragments of Indian pottery, Indian hieroglyphics and ground plans of several pueblos, invaluable for the archeologist and the ethnologist, but not of immediate concern in the present study. About forty of the total are “views” of Indians and Indian activities. A number are in color which in addition to the fact itself, is of interest as they were “printed in color” a fact recorded on some of the individual plates. Although I have not made the matter a point of special study, these colored plates must be among the earliest in government reports reproduced by multiple impressions, see Footnote 32 in No. 6 of this series, The Kansas Historical Quarterly, v. 16 (1948), August, p. 235. The report was also published privately by James H. Simpson, Journal of a Military Reconnaissance, From Santa Fe, New Mexico, to the Navajo Country in 1849 (Philadelphia, 1852). The plates here are credited to R. H. Kern but some are recorded as being after sketches by E. M. Kern. All plates are not identical with those in the 1850 government report and 34 are colored; the lithography in the 1852 printing was also by Duval.

Edward M. Kern was also a member of Commander C. Ringgold’s North Pacific exploring expedition of 1854. The Huntington Library of San Marino, Cal., has a number of Western diaries and letters of the Kern brothers as well as some biographical material and photographs supplied by Helen Wolfe. It is from this source that I have secured the birth dates of the three Kerns given in the text above. An obituary of E. M. Kern appeared in the Philadelphia Public Ledger, November 23, 1865. Kern county and Kern river of Cali-
Richard Kern was also the artist of Captain Sitgreaves’ expedition in the Southwest in the summer and fall of 1851. In the report of the expedition he is represented by 23 plates of scenery and Indians.\(^{26}\)

Richard Kern, then, had extensive experience in Western travel and field sketching before he joined Capt. J. W. Gunnison’s command in St. Louis in early June, 1853, for the survey of the central route. The engineering and scientific party arrived at Westport on June 15, where Kern was left to select a fitting-out camp, while Captain Gunnison and Lieutenant Beckwith, the second in command, went on to Fort Leavenworth to select the military escort. They returned in a few days, and Lieutenant Beckwith reported:

Our encampment was some five miles from Westport and the western line of the State of Missouri, selected by Mr. Kern in a fine grove near a spring, and surrounded by fine grass and an open prairie, and in the midst of the various Shawnee missions, which appeared well.\(^{27}\)

Some days were spent in buying and breaking mules and employing teamsters and camp helpers, but by June 23 the party made “its first marching essay” and despite soft roads caused by heavy rains, made eight miles on their first day of travel. The route followed was in general that of the Santa Fe trail (through modern Kansas) although side excursions of small parties were made from time to time in search of possible alternate railroad routes. Captain Gunnison and Kern, for example, with an escort, left the main party on the trail near present Lawrence, Kan., and traveled northwest along the Kansas river (while the main command went southwest). Gunnison and Kern passed the frontier town of Uniontown, which had “a street of a dozen houses,” and on up the Kansas river valley until they came to a “new” fort, Fort Riley.\(^{28}\)

After some observations on the Smoky Hill and the Republican rivers, the party turned southward and again joined the main contex...
mand on the trail. The Arkansas river was crossed on July 20, "old" Fort Bent reached on July 29 and the mountains on August 5. Although observations and records were made on the crossing of the plains, the route was already so well-known that all felt the real work of survey would commence when the Rockies were reached. Although the diary of the expedition from Westport to the mountains is intensely interesting, the general attitude of the report is itself reflected in Kern's illustrations, for the first to appear is a view of the Spanish Peaks (in present southeastern Colorado) where the mountains were reached. Probably Kern made sketches, which would be priceless at present, of some if not all of the points suggested in the above brief review of the crossing of the Plains. They seem to be no longer extant.29

The route of the party from the mountains westward is clearly indicated by the remaining Kern illustrations which include:

1. "Sangre de Cristo Pass Looking Toward San Luis Valley." The first crossing of the mountains was made through this pass (about four miles north of modern La Veta Pass) and the westward descent led into the San Luis valley of southern Colorado.

2. "Fort Massachusetts, At the Foot of the Sierra Blanca, Valley of San Luis." [Reproduced on the cover of this magazine.] This post was near the present site of Fort Garland (Colorado) which was at one time commanded by Kit Carson.

3. "Coo-Che-To-Pa Pass, View Looking Up Sahwatche Creek, Sept. 1st." This pass (modern spelling Cochetopa) is on the western side of the San Luis valley (northwestern Saguach county, Colorado).30


The illustration shows that the country through which the proposed railroad was to pass was becoming exceedingly rugged, for the party now was not far from the present Black Canon of the

29. All of Kern's illustrations in v. 2 of the Reports, were redrawn by John M. Stanley, a fact made necessary by Kern's death. Stanley redrew them from Kern's field sketchbooks but what has happened to these original sketchbooks, and most of those of other illustrators of the Reports, I have been unable to ascertain. In 1939, the Oklahoma Historical Society acquired an extensive collection of original materials bearing on the Whipple survey of 1853-1854. Included were several botanical drawings, eight paintings, 24 original drawings all by Millhausen, plus the four drawings of Tidball mentioned in Footnote 19.—See The Chronicles of Oklahoma, Oklahoma City, v. 25 (1950), pp. 232, 233. The National Archives now has many of the original manuscript reports and letters of the surveys, but the sketchbooks of the artists on the surveys are not among them as I have ascertained by correspondence with the Archives and by a personal visit in the summer of 1949. I shall have occasion to refer to this point at one or two places in the subsequent discussion in the text.

30. Backwith's first report, p. 47, Reports, v. 2. Gunnison's party determined the elevation at the summit of the pass to be 10,052 feet. It appears on modern maps with exactly the same figure. Kern's view of the pass has been made the basis of an interesting color illustration "Old Bill Williams at Cochetopa Pass" painted by Marjorie Thomas in Favour's book cited in Footnote 24.
Gunnison; for the Grand river of the Beckwith-Gunnison report is now appropriately called the Gunnison river. An excerpt from Beckwith’s journal, a few days before this illustration was sketched, gives a vivid glimpse of the difficulties encountered by the survey.

This morning [Sept. 9th, wrote Beckwith] . . . large working parties of soldiers and employees started forward, under their respective commanders, to prepare the crossing of the creek [a tributary of the Gunnison]; and at 2 o’clock p. m. we received orders to move on with the train. Ascending from the ravine on which we had encamped, we were forced high up on the mesas, to avoid numerous deep ravines, which we succeeded in turning successfully, when a short, steep ascent around the rocky wall of the table to our left, brought us, four miles from our morning camp, to the top of the difficult passage—a rapid descent of 4,055 feet in length, and 935 in perpendicular height above the stream, covered with stones of all sizes, from pebbles to tons in weight, with small ledges of rocks cropping out at various points. Some of the stones had been removed in the proposed road; but the wagons, with locked wheels, thumped, jarred, and grated over the greater portion, especially those too large and deeply imbedded in the soil to be removed, until their noise quite equaled that of the foaming torrent creek below. At one point, as they passed obliquely over a ridge, it was necessary to attach ropes to the wagons, and employ a number of men to prevent their overturning. Two hours were thus employed in descending our eighteen wagons, and in twice crossing the creek, in the bed of which we had to descend for a quarter of a mile, before we could gain a permanent footing on the west side. The creek is sixty feet wide by from one to two deep, with an impetuous current falling with a loud noise over a bed of rocks and large stones. Just above its mouth two fine streams half a mile apart, enter Grand [Gunnison] river from the Elk mountains. Day’s march five miles, through a heavy growth of sage. 31

5. “View of the Roan or Book Mountains At the Spanish Trail Ford of Green River, Oct. 1st.”

The survey was near the present Colorado-Utah border when Kern made the sketch upon which this illustration is based, and two days before had come upon the well-known Spanish trail that led from Santa Fe to the Pacific Coast at Los Angeles. The trail at this point was almost in constant use by the Green River Utahs, whom Beckwith characterized as “...The merriest of their race I have ever seen, except the Yumas—constantly laughing and talking, and appearing grateful for the trifling presents they receive.” 32

For the next two weeks the survey continued north and westward (they were now well within present Utah) and eventually reached the great Sevier valley of central Utah. Their arrival here marked,

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in more ways than one, the end of a definite stage of the survey. Gunnison himself remarked that

... a stage is attained which I have so long desired to accomplish: the great mountains have been passed and a new wagon road open across the continent—a work which was almost unanimously pronounced impossible, by the men who know the mountains and this route over them. ... That a road for nearly seven hundred miles should have been made over an untraversed track, through a wilderness all the way, and across five mountain ranges, (the Sierra Blanca, San Juan, Uncompahgra, Sandstone, and Wahsatch) and a dry desert of seventy miles between Grand [Gunnison] and Green rivers, without deserting one of our nineteen wagons, and leaving but one animal from sickness and one from straying, and this in two and a half months, must be my excuse for speaking highly of all the assistants on this survey.  

On October 25, Captain Gunnison, Richard Kern, Greutzfeldt, the botanist, Potter the guide, and an escort of eight men left the main party to explore the vicinity of Sevier Lake (in west central Utah). At noon the next day a survivor of Gunnison’s party, weak and exhausted, reeled into the main camp, with the tragic news that Gunnison’s party had been ambushed. Four of the soldiers escaped but the remaining eight of the party were killed. Beckwith wrote of the tragedy:

The sun had not yet risen, most of the party being at breakfast, when the surrounding quietness and silence of this vast plain was broken by the discharge of a volley of rifles and a shower of arrows through that devoted camp, mingled with the savage yells of a large band of Pah-Utah Indians almost in the midst of the camp; for, under cover of the thick bushes, they had approached undiscovered to within twenty-five yards of the camp-fires. The surprise was complete. At the first discharge, the call to “seize your arms” had little effect. All was confusion. Captain Gunnison, stepping from his tent, called to his savage murderers that he was their friend; but this had no effect.  

Gunnison’s cry did have the effect of drawing the attention of the Indians, for he fell, his body pierced with 15 arrows.

As soon as the news was received by the main camp, relief was dispatched in the hope that other survivors could be rescued but only the eight bodies mutilated by Indians and wolves were found.

The command of the survey now devolved on Lieutenant Beckwith, who continued the survey northward toward Salt Lake City until November 8. Efforts to regain instruments, field notes and Kern’s sketch book, which had been taken by the Indians, were urged upon the Mormon settlements, and eventually “all the notes, most of the instruments, and several of the arms lost” were delivered

83. Gunnison was quoted by Beckwith, ibid., p. 70.
84. Ibid., p. 74. An interesting account by one of the Indian participants in this massacre (as told in 1894) is given by J. F. Gibbs in the Utah Historical Quarterly, Salt Lake City, v. 1 (1928), pp. 67-75.
to Beckwith in Salt Lake City, where the survivors of the survey spent the winter of 1853-1854.\textsuperscript{35}

The officers spent their time during the winter working up reports and in attempts to replace some of the personnel who had fallen victim to the Indians. On March 1, two travel-worn men reached Salt Lake City, one of whom made almost immediate contact with Lieutenant Beckwith. Beckwith invited the two men, S. N. Carvalho and F. W. Egloffstein, to join his mess at “E. T. Benson’s, one of the Mormon apostles.” Carvalho and Egloffstein had been members of another—and the last—of Colonel Fremont’s expeditions across the Rockies. Fremont and his father-in-law, Senator Benton of Missouri, were intensely interested in proving that the central route to the Pacific was the most feasible. To prove this point, Fremont, despite his terrible experiences in the Rockies of 1848-1849, set out to show that the central route could be followed to the Pacific coast in winter. To carry out his project, he organized an expedition at his own expense which assembled at Westport, Gunnison’s starting point, late in September, 1853. Carvalho was officially the “artist and daguerreotypist” of the expedition and Egloffstein, the “topographical engineer.”\textsuperscript{36}

Fremont’s party, which included ten Delawares, was under way westward on September 24. Their route in general followed that of Gunnison, who had started from Westport three months earlier. In fact, when Fremont and his party got into the mountains, they actually followed the trail left by Gunnison’s wagons.\textsuperscript{37}

As the party crossed successive ranges of the Rockies in the dead of winter, the rigors of travel increased alarmingly, food gave out even after their horses were eaten, one man died from exhaustion and the remainder were in a perilous state when they arrived at the

\textsuperscript{35} Beckwith’s first narrative, p. 75, \textit{Reports}, v. 2. In addition to the six Kern illustrations described in the text above, there were six other illustrations: “View of Sangre de Cristo Pass Looking Northeast From Camp North of Summit, Aug. 11”; “Sangre de Cristo Pass” (looking down Gunnison creek); “Peaks of the Sierra Blancas”; “Head of First Canon of Grand River”; “View of Ordinary Lateral Ravines on Grand River;” and “Rock Hills Between Green and White Rivers.” Crediting and page insertion of these plates are very irregular and there is no “List of Illustrations.” In some copies, as many as three of the plates are credited to Kern alone; in others all are credited “J. M. Stanley from sketch by R. H. Kern.” In addition to the 12 Kern sketches there is a 13th plate “View Showing the Formation of the Canon of the Grand River.” In some copies this is credited to F. W. Egloffstein; in others to “J. M. Stanley from sketch by F. W. Egloffstein.”

\textsuperscript{36} Most of our knowledge of this expedition comes from S. N. Carvalho, \textit{Incidents of Travel and Adventure in the Far West} (New York, 1859; there are several printings and editions of this book). Fremont’s account has never been published, although there are three contemporary letters (the first two to Senator Benton) available; one dated “Big Timber on Upper Arkansas, Nov. 26” in \textit{National Intelligencer}, Washington, March 18, 1854, p. 3; a second dated “Parowan, Iron County, Utah Territory, February 9, 1854,” in \textit{ibid.}, April 13, 1854, p. 1; and a third to the editors of the \textit{National Intelligencer} describing the general results of the expedition, June 15, 1854, p. 4 (later reprinted as 33 Cong., 1 Sess., \textit{Senate Misc. Doc. 67}). Carvalho’s experiences as a daguerreotypist I have reviewed in \textit{Photography and the American Scene} (New York, 1938), pp. 262-266.

\textsuperscript{37} Carvalho, \textit{op. cit.}, pp. 81, 82.
Mormon settlement of Parawan (southern Utah) on February 8, 1854. Fremont’s brief comment, an obvious understatement when compared to Carvalho’s account of the party’s sufferings, gives some idea of the state of affairs: The Delawares all came in sound but the whites of my party were all exhausted and broken up and more or less frostbitten. I lost one [man]. . . .” 38

Both Carvalho and Egloffstein were so exhausted upon their arrival at Parawan that they could go no farther. Fremont and the rest of the party, after resting for a few days, went on to California. The two men left behind, when they had gained sufficient strength, started slowly north for Salt Lake City, which they reached on March 1, as already described. Beckwith immediately offered both men employment on the railroad survey which was soon to take the field again and complete the survey to the coast. Carvalho declined but Egloffstein accepted and took Kern’s place. 30

Beckwith’s party began their work in the spring with a survey of a route northeast from Salt Lake City to Fort Bridger, a possible connection with any line coming east through South Pass (in present Wyoming), but the real work of the party got under way on May 5, 1854. The survey passed south of great Salt Lake and then turned west, traversed the desolate country through (present) northern Nevada, coming eventually to the Sierra Nevadas. Here a number of passes were explored that might effect a railroad crossing of the mountains into the Sacramento valley.

The party completed its work at Fort Reading (present Redding, Shasta county) in northern California on July 26. 40

The character of the country traversed, especially through the Sierra Nevadas, is represented in illustration by a series of five folding panoramic views and eight full-page ones, all steel engravings, and based on sketches by Egloffstein. Probably in none of the 12 volumes of this monumental work are the illustrations more specifically directed to the immediate purpose of the report, that of depicting the country through which a railroad would have to pass, than in these 13 illustrations by Egloffstein. To enhance their value for this specific purpose, important landmarks are identified in the illustrations, and these in turn are keyed into the map that accom-

38. Fremont’s second letter; see Footnote 36. A letter from Parawan published in the National Intelligencer, May 18, 1854, p. 1, stated that Fremont arrived in that town on February 7.

39. Carvalho, op. cit., p. 140. Incidentally, Carvalho (1815-1899) should be added to our list of Western artists. He several times mentioned sketching or painting on the way west in his book (pp. 140, 141, 150, 192, 212) and upon his return to New York City painted Western scenes based on his experiences.—For a brief biographical sketch, see Tuft, Photography and the American Scene, p. 490.

40. Beckwith’s second report, pp. 20 and 58, Reports, v. 2.
panied the report. Although Beckwith's reports are contained in volume two of the set, only one Egloffstein illustration occurred in this volume. This view is a lithographic representation of the canyons of the Grand [Gunnison river] and was made when Egloffstein was still with Fremont (see Footnote 35). The 13 steel engravings are found in volume 11 of the reports, where they were undoubtedly placed in order to be with the maps.

The list of these Egloffstein engravings (all dates cited below should include the year 1854) is given in full, as the illustrations and their titles tell in concise fashion the story of this part of the survey. The meticulous care exercised by Egloffstein in dating, even to the hour, and specifying the observation point, is a revealing fact of the man himself.

**FULL-PAGE PLATES**

(The first four, as can be seen from the dates, are of country north of Salt Lake City.)

1. “Weber Lower Canon April 5th at 2 p. m. From an Island in Weber River, Valley of Great Salt Lake.”
2. “Second or Sheeprock Canon of Weber River April 6th at 1 p. m. View Looking East.”
3. “Porcupine Terraces Uintah Mountains in the Distance.”
4. “Round Prairie From Head of Same April 21st at 10 a. m.”
5. “Humboldt Pass May 22d at 12 a. m. From High Peak East of Pass.”
6. “Franklin Valley May 24th at 10 a. m. From a Spur of the Humboldt Mountains.”
7. “West End of Madelin Pass June 26 at 8 a. m. From a Peak Overlooking Madelin Creek.”
8. “Portion of the Main Mountain Passage of the Upper Sacramento on Pitt River July 20 at 1 p. m. 25 Miles South of Mt. Shasta.”

**FOLDING PANORAMIC VIEWS**

1. “Gooshoot Passage Showing 65 Miles of the Proposed Line of Railroad From the Desert West of Great Salt Lake to the Humboldt Mountains May 20th at 2 p. m. From a Peak Near Antelope Butte.”
2. “Valley of the Humboldt River at Lassen’s Meadows Showing 50 Miles of the Projected Line of Railroad June 9th at 3 p. m. From a Peak on the Western Humboldt River Range.”
3. “Valley of the Mud Lakes Showing Eighty Two Miles of the Projected Railroad Line June 14th at 9 a. m. From Mud Lake Peak.”
4. “Madelin Pass Showing 70 Miles of the Projected Line of Railroad June 19th at 2 p. m. View Taken From a Mount Observation.”
5. “Northern Slopes of the Sierra Nevada June 30th at 9 a. m. View Towards the West.” [This view shows Mount Shasta at a distance of 50 miles.] 41

41. All 13 engravings are credited to “C. Schurman from F. W. Egloffstein.” Schurman was undoubtedly an artist employed by the firm of Selmar Siebert’s Engraving & Printing Establishment (Washington) who printed these illustrations. Plates numbered 2 and 3 of
Egloffstein was not only a member of Fremont's and Beckwith's surveys in 1853 and 1854 but he was also on the Ives survey of the Colorado river in 1858. He is represented in the Ives report also by a group of notable steel engravings. That he was an artist of considerable merit and a most skillful map maker there is no doubt. Egloffstein, during the Civil War, became colonel of the 103d regiment of New York volunteers, was seriously wounded and brevetted out of service as a brigadier general. Still later he became actively engaged in developing a half-tone process based upon a patent he secured in 1865. By one authority he has been called "The inventor of half-tone." He died in London in 1898.

Albert H. Campbell, to consider still another illustrator of the Reports, was a civil engineer with considerable ability in sketching. He is represented by a number of illustrations in two volumes of the Reports, 3 and 7. Campbell was engineer and surveyor for Lieutenant Whipple's exploration along the 35th parallel. The survey began at Fort Smith, Ark., on July 14, 1853, traveled nearly due west through (present) Oklahoma, New Mexico and Arizona, and arrived at Los Angeles on March 21, 1854. Möllhausen was the official engraver of the full-page group also have the engraver designated, R. Henselwood and S. V. Hunt, respectively. There is a brief discussion of the significance of Egloffstein's engravings in appendix B of v. 11 (see especially p. 126).

There is no list of illustrations of these 13 views (in v. 11) that I have ever seen but I have never found more than 13 in a set although I have found copies of v. 11 in which one or more of the engravings were lacking; not a surprising fact when one considers that there were at least three printings of this volume (see appendix to this article).

42. See No. 6 of this series, The Kansas Historical Quarterly, v. 16 (1948), August, pp. 239, 242, 243.

43. See Beckwith's comments in v. 2 (first report) of the Reports, p. 88 ("my very able assistant") and p. 137 ("I cannot speak too highly of the fidelity, zeal, and ability with which Mr. Egloffstein performed these onerous labors") and Lieutenant Ives (Report Upon the Colorado River of the West, 36 Cong., 1 Sess., House Ex. Doc. 90, Washington, 1861), p. 6 ("The privation and exposure to which Mr. Egloffstein freely subjected himself, in order to acquire topographical information, has resulted in an accurate delineation of every portion of the region traversed.") For Beckwith's comment on Egloffstein as a map maker, see v. 2 of the Reports, appendix B of his first report, p. 125. Ives also mentions Egloffstein's skill in drawing maps, see appendix D in Ives report. For Egloffstein's patent, see U. S. Letters Patent No. 51109, November 21, 1865; and for his efforts to develop the patent see S. H. Horgan's "General Von Egloffstein, the Inventor of Half-Tone," Int. Annual of Anthony's Bulletin, New York, v. 9 (1897), pp. 201-204.

Von Egloffstein was the author of a New Style of Topographical Drawing (Washington, 1857), and was the editor of Contributions to the Geology and the Physical Geography of Mexico (New York, 1864). He was listed as a resident of New York City in directories extending from 1864 to 1873. According to Col. Wm. J. Mangin of the adjutant general's office (Albany, N. Y.), records in that office state that Egloffstein was mustered in as colonel of the 103d regiment of infantry (N. Y.) on February 20, 1863; "Age at entry, 38 years; born, Prussia; eyes, blue; hair, light; height 5 ft. 7 inches. Brigadier general by brevet, for gallant and meritorious services, to date from March 13, 1865"; see, also, Frederick Putnam, New York in the War of the Rebellion, 1861-1865, 3d ed. (Albany, 1912), v. 4, pp. 3201, 3202 and 3217.

A grandchild, C. L. von Egloffstein, is now (1951) a resident of New York City. Mr. von Egloffstein wrote me on March 25, 1951, that to the best of his recollection his grandfather died in London in 1898, although he was not sufficiently interested to look the matter up. If this last date is correct, it would put von Egloffstein's life span at 1824-1898.

Egloffstein's name appears in the literature in at least four forms: Egloffstein; v. Egloffstein; Van Egloffstein, and Von Egloffstein; probably the last is the correct form. In a number of reports by Egloffstein in Official Records of Union and Confederate Armies (Series I, v. 9), Egloffstein signed himself as "Baron Egloffstein" and in several drawings in the Ives report, they are credited to "Fhr. F. W. V. Egloffstein," the German equivalent of Baron Egloffstein.
cial artist of the expedition and we have described the survey in more detail in Part 6 of this series. Several of the illustrations in this report, however, are credited to Campbell, the most important of which are views of the crossing of the Colorado river. The expedition crossed the river, on the Arizona-California boundary (at or near where U. S. Highway 66 now crosses it) on February 27, 1854. The crossing was watched with great interest by a huge group of Mojaves, friendly but virtually uncivilized. After the river was crossed Whipple recorded in his diary:

Every day these Indians have passed with us has been like a holiday fair, and never did people seem to enjoy such occasions more than the Mojaves have done. They have been gay and joyous, singing, laughing, talking, and learning English words, which they readily and perfectly pronounce. Everything that seems new or curious they examine with undisguised delight. This evening a greater number than usual remained in camp. Placing confidence in our good intentions and kindness, all reserve was laid aside. Tawny forms could be seen flitting from one camp-fire to another, or seated around a blaze of light, their bright eyes and pearly teeth glistening with emotions of pleasure.  

Evidently the crossing of the river interested those responsible for selecting the illustrations for Whipple's report, as well as the Mojaves, for there are four views of the Mojave villages and the crossing. Three of these are credited to Campbell and the fourth to Möllhausen. 

All four views show the Mojaves in various activities and it can be readily seen why Whipple noticed the tawny forms about the camp-fire as evidently men and women alike wore little more for the evening's festivities than they did the day they were born.

One other illustration, a woodcut, credited to Campbell in volume 3 of the Reports, should be noted, as it depicts "Albuquerque and the Sandia Mountains." 

In the fall of 1854, Campbell joined Lieutenant Parke, who had been directed to survey possible railroad routes in California between San Francisco and Los Angeles as the first part of his task. Upon the completion of this task he was to study a portion of the

44. Whipple's report, Reports, v. 3, p. 119.
45. The four views in v. 3 of the Reports are: "Río Colorado Near the Mojave Villages, View No. 1 From the Left Bank Looking W. N. W." J. J. Young from a sketch by A. H. Campbell (frontispiece of "Itinerary"); "Camp Scene in the Mojave Valley of Río Colorado" (credited to Campbell in some printings; uncredited in others, facing p. 113 in the "Itinerary"); "Río Colorado Near the Mojave Villages View No. 2 From an Island Looking North" (from "Report on the Topographical Features"), J. J. Young after H. B. Möllhausen; "Río Colorado Near the Mojave Villages View No. III From the Right Bank, Looking East," J. J. Young after Campbell (accompanying "Report on the Topographical Features").
46. This illustration will be found in the Report on the Geology of the Route, p. 30. There is still another full-page lithograph credited to "E. Stout after sketch by A. H. Campbell" in the topographic section of the Report, v. 3, facing p. 33, in the copies I have examined. The list of illustrations in this section does not carry the view which has the title "View of the Black Forest Mount Hope and Sierra Prieta."
route on the 32nd parallel, principally from Fort Yuma in extreme southwestern Arizona, across (present) southern Arizona and New Mexico, to the Rio Grande, thus making a connecting link with Lieutenant Pope’s survey along the 32nd parallel through Texas.

Campbell began active work on the Parke survey at San José, Cal., on November 24, 1854, and worked south to San Diego, which was reached on May 7, 1855, completing the first part of the survey. The second part was begun almost immediately, for the survey was at Fort Yuma on June 9 and pushed east, traveling many times at night in crossing the desert stretches, and completed their work at Fort Fillmore, N. M., on the Rio Grande on August 21.47

The eight full-page lithographic views which appeared in Parke’s report are all credited to Campbell. Of the eight, three depict scenes in California, the remaining five in southern Arizona. Three of the plates have greater interest than the rest and include “Guadalupe Largo & San Luis Harbor” (Guadalupe Largo is a plain of about 80 square miles extending from the coast inland in the neighborhood of San Luis Obispo. San Luis harbor is near modern Pismo Beach); “Warner’s Pass From San Felipe” (Warner’s pass was on the wagon road between San Diego and Fort Yuma. It crossed the mountains immediately to the west of the Colorado Desert); and “Mission Church of San Xavier Del Bac” (some 8 or 10 miles south of Tucson, Ariz.).48

Campbell, as far as I have been able to ascertain, made no other published illustrations. From 1857 to 1860 he was “Superintendent of Pacific Wagon Roads,” charged with surveys of wagon roads in many Far Western states and territories but with his office in Washington. At the outbreak of the Civil War, Campbell followed the lead of his native state, Virginia, and became Maj. A. H. Campbell, Chief of Topographic Bureau, C. S. A. His maps played an important part in Southern military tactics. After the war, he settled in West Virginia and for the remainder of his life was chief engineer of a number of railroads. He died in Ravenswood, W. Va., on February 23, 1899.49

47. Campbell’s itinerary can be minutely followed in appendix E (Reports, v. 7) which is a table of distances, etc., kept by Campbell himself.

48. The illustrations are credited to original sketches of A. H. Campbell in the “List of Illustrations,” p. 23, Reports, v. 7. The remaining illustrations “South End of Santa Inez Mountains, & San Buenaventura Valley” (California); “View on the Gila Below the Great Bend” (Arizona); “Valley of the Gila & Sierra de las Estrellas, From the Maricopa Wells” (Arizona) [reproduced between pp. 368, 369]; “Valley of the Arawaya From Bear Springs” (Arizona); “Porphyritic Statue, Palencillo Range” (Arizona).

49. Campbell, born in Charleston (W. Va.) on October 23, 1826, was a graduate of Brown University in the class of 1847. For a brief biographical sketch, see Historical Catalogue of Brown University, 1764-1914 (Providence, R. I., 1914). I am indebted to Clifford K. Shipton, custodian of Harvard University Archives, for finding this sketch of Campbell’s life. For mention of Campbell in the Civil War, see Douglas S. Freeman’s R. E. Lee
Of all the illustrators for these famous reports, least is known about Charles Koppel and John Young. Koppel sailed from New York City on May 20, 1853, with Lt. R. S. Williamson and other members of a survey party, bound for California. San Francisco was reached exactly one month later and the party went immediately to near-by Benicia where there was an army post and where the survey began its work. Koppel had the official title of “assistant civil engineer and artist.” Nearly the only comment on his work was Williamson’s statement: “The sketches which accompany this report were made by Charles Koppel, assistant civil engineer, and they will serve as aids in forming a correct idea of the nature of the country.”

Lieutenant Williamson on this survey was charged with exploration of possible routes that would connect the east-west surveys along the 32nd and 35th parallels in California and was instructed to examine especially the passes of the Sierra Nevada, that formidable barrier to any railroad from the East, leading from the San Joaquin and Tulare valleys. As a result, Williamson’s efforts were made chiefly in central and eastern California from Benicia southward. The work of the party began on July 10 and was completed at San Diego on December 19.

The illustrations for Williamson’s report are therefore confined solely to California and most of them are the work of Koppel who is credited with 21 full-page lithographs and 26 woodcuts.

Of all the illustrations by Koppel, the one which is probably of the greatest interest is his view of Los Angeles [reproduced facing p. 368], which was probably sketched on November 1, 1853. “This place,” the report reads, “is celebrated for its delightful climate and fertile soil. Large quantities of grapes are exported to San Francisco, and considerable wine was formerly produced. The accompanying view was taken from a hill near the city.”

(New York, 1935), v. 3; and Lee’s Lieutenants (New York, 1943), vols. 2 and 3. A long biographical sketch of Campbell’s life is reported to be in the Charleston (W. Va.) Gazette, March 4, 1899. I have not been able to locate this issue of the Gazette in any of the leading libraries of the country. However, Campbell’s obituary clipped from the Gazette is in the files of the alumni office, Brown University, Providence, R. I. I am indebted to Miss Ruth E. Partridge of the alumni office who provided me with a typed transcript of the clipping.

50. Koppel’s official designation will be found in pt. 1, Reports, v. 5, p. 7; Williamson’s comment on Koppel in a letter to Secretary of War Jefferson Davis, dated December 31, 1854, appearing in the above volume immediately after the second title page.

51. The illustrations are specifically credited by the line “From original sketches in the field by Mr. Charles Koppel” in the list of “Illustrations” for pt. 1; they include 12 lithographic plates and 12 woodcuts in text. For pt. 2 (the geological report) the list of “Illustrations” specifically credits either Koppel or Blake (see Footnote 21). Ten lithographic views (see Footnote 21) also for the omission of Plate XIII) and 14 woodcuts are credited to Koppel. In addition one lithograph is credited to Koppel “from a sketch by W. B. B. [Blake].”

52. Reports, v. 5, pt. 1, p. 35. The view of Los Angeles in all copies I have seen is opposite this page. The date when the sketch was made is based on the fact that Smith
Other full-page Koppel illustrations which are of interest include: “View of Benicia From the West,” “U. S. Military Post, Benicia,” “Mission and Plain of San Fernando,” “Mission of San Diego,” and two desert views, “Colorado Desert and Signal Mountain” and “Valley in the Slope of the Great Basin.” The last view looks east from the Tejon pass (northwest Los Angeles county) into the desert “with its peculiar vegetation.”

In 1855, Lieutenant Williamson was back again in California. He left New York City with Lt. H. L. Abbot and five civilian assistants, among whom was John Young, “draughtsman,” on May 5, 1855, and arrived at San Francisco on May 30. Benicia was again made the outfitting headquarters for a survey, this time directed northward to determine “the practicability, or otherwise, of connecting the Sacramento valley, in California, with the Columbia river, Oregon Territory, by a railroad.”

The survey got under way July 10, 1855, and was completed by November 15 of the same year. More or less independent and lateral and alternate surveys were made by Lieutenant Williamson and by Lieutenant Abbot, some accomplished with great difficulty and considerable danger because of an uprising among the northern Indians. Williamson became seriously ill before his report was made and as a result the final report was prepared by Abbot (Reports, v. 6).

The survey, made through northern California and Oregon, traversed a country that was in many respects an almost unknown region. “The great importance of the Williamson-Abbot exploration,” writes one modern student of the surveys, “lay in the thorough examination made of the Cascade Range. Their observations of distances, practicability of river valleys and passes, and

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53. The brief quotation is from Reports, v. 5, pt. 2 (geology), p. 215. The illustration appears opposite this page. The other illustrations, in the order listed above, will be found, in Reports, v. 5, frontispiece, pt. 1; facing p. 4, pt. 2; facing p. 74, pt. 2; following p. 49, pt. 1, as does “Colorado Desert and Signal Mountain.” A number of Koppel’s woodcut illustrations are also of considerable interest; see especially “Strait of Carquinez and Martinez, as Seen From Benicia” (p. 9) and “Tejon Indians” (p. 20), both in pt. 1, Reports, v. 5.

The only other illustration by Koppel of which I have found mention is a bust portrait, nearly life-size, of Jefferson Davis reproduced lithographically in 1865; see Harry T. Peters, America on Stone (Douglas, Diran and Company, 1931), p. 255. Peters only comments on Koppel’s “unknown” I have written all the Southern historical societies, and many other places, and have found no record of Koppel.

54. Secretary of War Jefferson Davis’ instructions to Lieutenant Williamson, Reports, v. 6, “Introduction,” p. 9; dates are from pt. 1 of this volume, p. 56.
adaptability of the soil to cultivation were an invaluable contribution to the existing knowledge of Oregon Territory.”

The general report of the survey contains 12 full-plate lithographic views and two woodcuts which are credited “From original sketches made by Mr. John Young, artist of the Expedition.” The geology section of the report also contains a single full-page view which, although uncredited, is doubtless the work of Young.

One of the unusual features of Abbot’s complete report, however, is the inclusion of ten colored full-page lithographs of trees characteristic of the country passed over on the survey. In some respects, these plates are as interesting as any in the report, for they not only represent striking flora, but the plates have been drawn in their natural habitat with the inclusion, many times, of rugged and distant backgrounds. Five of the ten plates are credited to Young and there is reason to believe that all ten were his work.

Young’s views, although interesting, are for the most part illustrative of the rugged and mountainous country traversed. Possibly of greatest interest are “Lassen’s Butte From Vicinity of Camp 18” (Lassen Peak in present Shasta county, northern California); “Mount Hood From Tysch Prairie” (present Hood River county, northern Oregon); and “Diamond Peak and Ravine of Middle Fork of Willamette River, From Camp 48 W” (present Lane county, west central Oregon).

Additional information concerning Young beyond that given in Abbot’s report is indeed meager. J. J. Young, as already pointed out (see p. 373), redrew two of A. H. Campbell’s sketches and probably J. J. Young is the John Young of the Williamson-Abbot survey. A number of the illustrations of the Ives expedition of 1858 were also redrawn by J. J. Young after sketches by Möllhausen and Egloffstein.

The name of J. J. Young also appears on 11 very beautiful lithographs in color to be found in a report made by Capt. J. N. Macomb. Macomb explored the country from Santa Fe to the Junction of the Grand and Green rivers (Colorado) in 1859, with Dr.

55. Albright, op. cit., p. 152. Mr. Albright’s extensive studies on the surveys and their reports are invaluable and time saving in studying the Reports themselves.

56. The credit line appears in the “List of Illustrations,” p. 24 of pt. 1, Reports, v. 6. Abbot himself implied that all views are to be credited to Young (p. 3 of pt. 1) in the statement: “The masterly sketches of views upon the route, and the characteristic style of the topography upon the accompanying maps, testify to the professional skill of Mr. Young.”

57. The botanical section of v. 6 is comprised in pt. 3 of the complete report and was written by Dr. T. S. Newberry. Newberry complained on p. 52 of pt. 3 that Young failed to make a sketch of one particular tree which would imply that Young had made the others. From the fact that the five uncredited, Plates I to V inclusive, were drawn in the same manner, i.e., with extensive backgrounds, as are Plates VI to X and which are credited on each plate to “J. Young del.” would indicate that Young was responsible for all ten.

J. S. Newberry as geologist. Newberry made a number of sketches of scenery along the way and they were made into a group of water colors by Young for reproduction. Newberry himself is represented by three black and white illustrations in the report. 59

Although exact identification has not been made, John J. Young probably spent his remaining years in Washington after his return from the survey, as there is an individual of this name listed in Washington city directories from 1860 until 1879. He is sometimes identified as draftsman for the War Department, as topographical engineer, and as engraver. He died in Washington on October 13, 1879, at the age of 49. 60

[The Remaining Illustrators of the Pacific Railroad Reports Will Be Discussed in Part XV To Appear in This Magazine in February, 1952]

59. For the Young credit of illustrations in the Ives report see No. 6 of this series, loc. cit., p. 243, Footnote 55. The Macomb report will be found in J. N. Macomb Report of the Exploring Expedition From Santa Fe, New Mexico, to the Junction of the Grand and Green Rivers of the Great Colorado of the West, in 1859 (Washington, 1876). The report, completed in 1861, was delayed in publication by the Civil War. Macomb mentioned “eleven water-color sketches” in the “Letter of Transmittal” in this volume but apparently from the context they had been done by 1861. The lithography, judging from its excellence, was done at the time of publication by T. Sinclair and Son, Philadelphia; for J. S. Newberry, see Dictionary of American Biography, v. 13, pp. 445, 446.

60. George M. Hall of the Library of Congress has examined Washington city directories in the period 1855-1880 for me and in many of the directories for this period the name of John J. Young occurs. Death notice of Young will be found in the Washington Evening Star, October 14, 1879, p. 3. As the name of J. Young appears in Harry T. Peters’ America on Stone, confusion with John J. Young who signed himself occasionally as “J. Young” may result. The J. Young of Peters was John T. Young of Rochester, N. Y., who died in that city on September 7, 1842, at the age of 28, see Rochester Daily Democrat, September 8, 1842, p. 3. I am indebted to Miss Emma Swift of the Rochester Public Library for information on John T. Young.