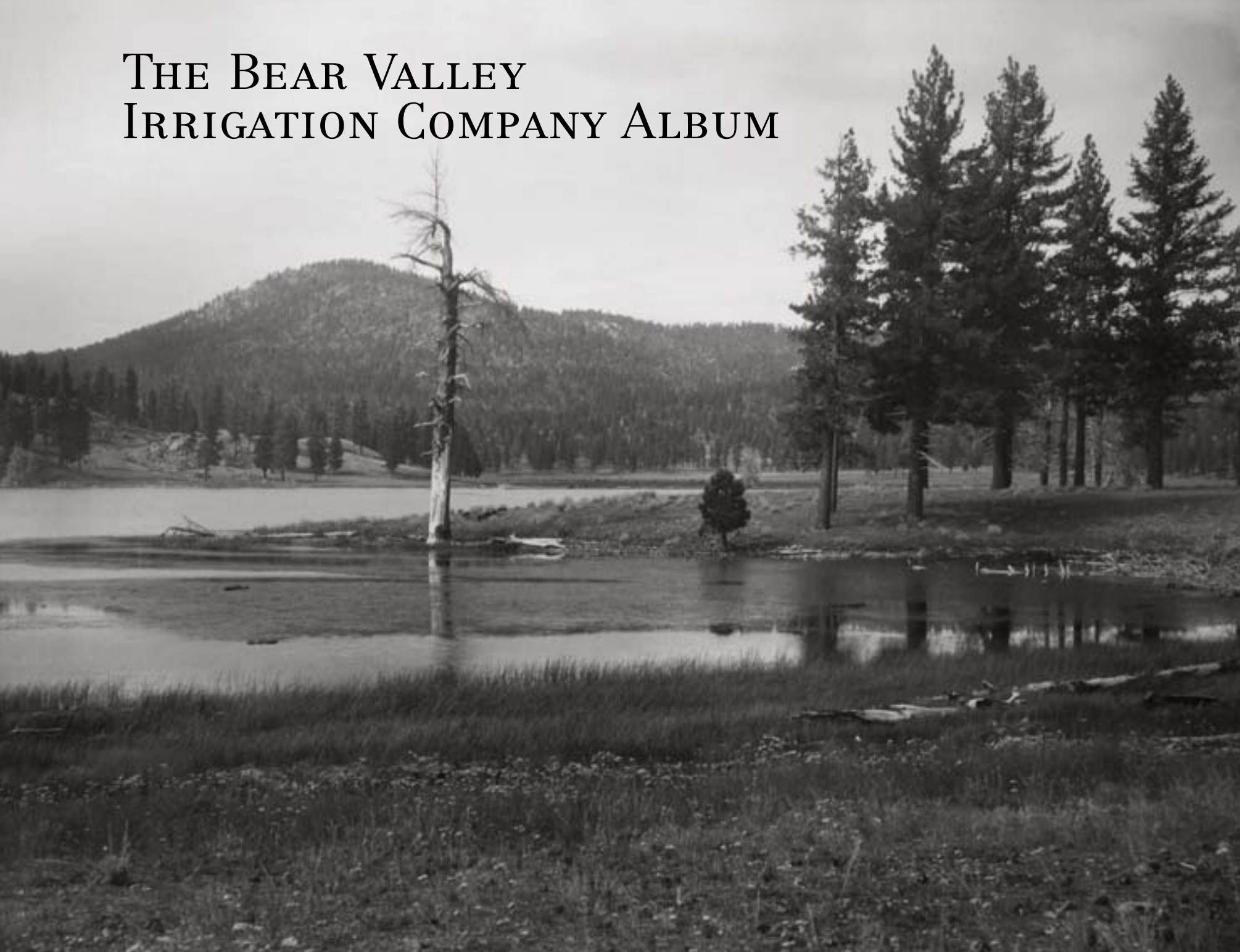


THE BEAR VALLEY IRRIGATION COMPANY ALBUM



Southern California Landscape Photographs by Herve Friend, 1891

Michael Dawson Gallery | Paul M. Hertzmann, Inc.

Front Cover: *Reflections from nature, Bear Valley Reservoir.*

Title Page Vignette: *Detail from Plate 7.*

Back Cover: *Bear Valley Reservoir from Gilner's Point.*

THE BEAR VALLEY IRRIGATION COMPANY ALBUM

Southern California Landscape Photographs by Herve Friend, 1891



Michael Dawson Gallery
535 North Larchmont Boulevard
Los Angeles, California 90004
Tel: (323) 469-2186 Fax: (323) 469-9553
www.michaeldawsongallery.com

Paul M. Hertzmann, Inc.
Post Office Box 40447
San Francisco, California 94140
Tel: (415) 626-2677 Fax: (415) 552-4160
E-mail: pmhi@hertzmann.net



Fig. 1 *Redlands from Smiley Hill.*

Introduction

CONVINCED OF THEIR RIGHT, perhaps even their duty, to move ever westward and occupy the lands of the North American continent, European and American settlers began arriving in California in the early nineteenth century, displacing the Native Americans and even some of the Hispanic “Californios” who had displaced the Native Americans before them.

The completion of the Owens Valley Aqueduct by the city of Los Angeles in 1916 left little doubt that water was the key to the phenomenal economic and population growth of Southern California in the early twentieth century. However, two generations before the aqueduct created a modern business oligarchy enriched by the ownership of vast tracts of formally “arid” real estate, storing water was already the “stuff” of dreams.

Photographers, among the immigrants propelled by “manifest destiny” into Southern California, documented its settlement, development and urban-

ization. Nevertheless, Herve Friend’s remarkable photographs of the Bear Valley reservoir, the early settlement in Redlands and other dramatic changes to the arid San Bernardino Valley are the only known mammoth plate photographs to be made in Southern California during the last decade of the nineteenth century. They provide incontrovertible evidence that when water was efficiently transported from its source to a center of population this precious resource literally made the desert bloom.

This album is rare. Currently, the only other known example resides in the archives of the Heritage Room at the A. K. Smiley Public Library in Redlands, California. With pleasure, we offer the forty-nine photographs from our album.

The finest of these images are included in the catalog, along with an original essay by Nathan Gonzales, Associate Archivist with the A.K. Smiley Public Library.

Conditions of Sale

The photographs in this catalogue are offered subject to prior sale. Customers will be billed for shipping and insurance at cost. Applicable sales tax will be charged.



Fig. 2 *Bear Valley
and reservoir.*

"IN A BROAD SENSE HE IS THE CREATOR of the east San Bernardino Valley" wrote Scipio Craig, editor of Redlands newspaper *The Citrograph* of Frank Elwood Brown in 1887.¹ Brown, an 1876 graduate of the Sheffield Scientific School at Yale University, arrived in Southern California in the spring of 1877. Little did the small community of Lugonia where he settled know that the east San Bernardino Valley was about to change forever.

Lugonia was named for the Lugo family, holders of the San Bernardino Valley land grant. After the arrival of the Franciscans and the founding of San Gabriel Mission in 1771, the valley was claimed as mission property and used for grazing the mission's cattle and raising crops. In an effort to wrest control of wealth and property from the Catholic church, the Mexican government secularized mission land in 1834. Between 1833 and 1846, governors of California made some 500 large grants of land to prominent Mexicans.² Many of these grants were lands confiscated from the missions. Three sons and a nephew of Don Antonio Maria Lugo were granted Rancho San Bernardino in 1842 by Governor Alvarado. In 1851, three years after California became a part of the United States, the Lugos freely chose to sell their land. They were luckier than many other Mexican grantees who were forced to cede their vast holdings when their titles to the land were disputed by American settlers attempting to usurp their property. The former Lugo lands in the San Bernardino valley were soon settled by Americans. The long growing season of Southern California, adequate water for a small population and for limited ranching and farming, and cheap land prices made the valley a desirable location for settlers.

The town of Lugonia was first settled in 1870. Located several miles southeast of San Bernardino, the small settlement grew over the next seven years. In February, 1877, it formed its own school district.

By May, the town had built a school and a church. Frank Brown bought property there in March; another easterner, Edward G. Judson, arrived the following month.³ Judson, a native of Bridgeport, Connecticut, came to Southern California following a twelve-year career as a stockbroker in New York City. In 1880 the two easterners went into business together, incorporating the Lugonia Packing Company.⁴ Orchards of peaches and apricots bore more fruit than could be sold fresh, so their new company dried and packed the excess. They handled some 250 tons of fruit in 1881, their first season in operation. At the same time they started to hatch a plan for a new agricultural colony. If water could be found, the worthless, arid hills south of Lugonia would become incredibly valuable.

As every student of Southern California history understands, if Judson & Brown were to make a go of land development, they would need to secure a steady water supply. In the semi-arid, desert-like greater Los Angeles basin water falls for the most part only between November and April. The remaining months can be hot and very dry. Rivers, including the Los Angeles, San Gabriel, and Santa Ana, flow above ground during the wet months, but otherwise often disappear below ground. "It was surely of these rivers that Mark Twain spoke when he said that he had fallen into a California river and 'come out all dusty.'"⁵ In 1868, the first of many artesian wells soon to be sunk all over Southern California was drilled near Compton in an effort to augment the amount of water collected in surface run-off.⁶ Some settlers, however, turned to a concept which would allow the rainfall and snow melt from the wet months to be harnessed for use in the dry months: water reservoirs. According to Walter Gillette Bates in an 1890 article in *Scribner's Magazine*: "The plan of water storage is to impound this water as it runs to waste in the season of flood and

Frank E. Brown, Herve Friend, and the Expansion of the Bear Valley Irrigation Company

NATHAN D. GONZALES

use it in the season of drought. Select the proper valleys for water-basins, close their outlets with dams, store great lakes of water when the mountain-snows melt, and then let it out slowly and at will through flumes and ditches to the lands below—this is the essence of the new idea.”⁷

Officially incorporating the “Red Lands Colony” in 1881, Judson and Brown initially purchased 320 acres of land from the Southern Pacific Railroad and swiftly expanded their holdings to some 4,000 acres. To obtain and deliver enough water to support agriculture, they incorporated the Redlands Water Company, the first of its kind in the east San Bernardino Valley, purchased fifty shares of water from the owners of the South Fork ditch, which ran from the Santa Ana River to Lugonia, and built a six-mile canal from the ditch to their new reservoir.⁸

Fig. 3 *View on Mill Creek Rd.
Mts. San Bernadino and Gray
Back in distance.*



Their water supply assured, they filed a preliminary map of Redlands with the county of San Bernardino. Land was divided into two and one half, five, or ten acre tracts. Wide avenues ran northeast and southwest and cross-streets intersected these every half mile. A plaza was placed in the heart of the town, and a portion was parceled into town lots.⁹ However, by 1882, the supplies of water for Redlands were exhausted. A new source of water would be necessary if the colony was to continue to grow.

Hiram Barton, who had lived in the area for nearly twenty-five years and knew its geography well, urged Brown to explore Bear Valley as a possible site for a reservoir. Bear Valley was located in the San Bernardino Mountains and was used in the summer for sheep grazing. Frank Brown’s first trip to Bear Valley proved a decisive moment for the growth of Redlands. He recalled: “Arriving in Bear Valley... my pocket level soon convinced me as we rode mile after mile down the nearly-level valley, that we were on one of the finest reservoir sites imaginable... When we reached the narrow granite gap, at the outlet of the valley, I saw what I had dreamed of for several years; a place specially designed by Providence for a dam to hold back the winter floods for summer use.”¹⁰ A new company, the Bear Valley Land and Water Company, was formed in 1883 with \$360,000 capital stock.¹¹ Brown turned his skills as a surveyor and engineer to the design of a dam for Bear Valley.

The dam that Brown designed at the outlet of Bear Valley was among the first single-arch dams built in the United States. Prior to this, dams were commonly constructed in a straight line between two opposing canyon walls and relied on the sheer weight of the material used in construction to hold the water back. Using the same principal employed in creating masonry arches over doorways, Brown’s dam drew its strength from the fact that the massive pressure of the stored water was distributed across the arch of the dam, which curved into the lake, and in turn that pressure was exerted against the granite mountain walls on either side. As such, the dam also required far fewer materials to construct, and was thus more cost-effective. That the Bear Valley Dam was featured in an article in *Scribner’s*



Magazine in 1890 is a testament to the ingenuity of Frank Brown.¹²

The dam's construction began in the summer of 1883 and was completed in late 1884. The winter rainy season of 1884–1885 allowed the first water from the reservoir to be delivered to Redlands in 1885.¹³

Plentiful water enabled Judson & Brown to promote both settlement and investment in their new colony. Redlands grew very quickly. In 1886 a group of arrivals from Chicago plotted out a new site for a downtown, encouraging the Santa Fe Railway to build a line to Redlands late the following year. Brick buildings were constructed; the business district was developed, and the number of new settlers increased dramatically. Redlands' first newspaper, *The Citrograph*, began publishing weekly during

the summer of 1887. By November, 1888, the burgeoning community was incorporated as a city and enveloped the older town of Lugonia.¹⁴

Without the water from Bear Valley, none of Redlands' phenomenal growth would have happened. In fact, large amounts of rain in the first years of the dam's operation exceeded Redlands' irrigation requirements and the dam's capacity. As much as one-quarter of the rainfall was wasted when the dam's capacity was exceeded. Using rainfall measurements taken since 1883 to predict expected precipitation, Brown envisioned an enlarged dam with increased capacity. He designed a new dam to extend 134 feet from its base to the top of the coping. As a result, the average depth of the lake would nearly double, from 15 feet to 29 feet and the capacity of the new reservoir would grow to

Fig. 4 *Untitled*
[Home in Redlands].



Fig. 5 *Alessandro tract from San Timoteo Hills.*

more than seven times that of the original.¹⁵ With such prospects Brown looked for more land that could be developed and irrigated with water from the larger reservoir.

He set his sights over the hills south of Redlands to an area known as the San Jacinto Plains. There the Alessandro Tract (now Moreno Valley) had been plotted in 1887, but without enough water the original owners had made little progress with its development. Brown saw the tract and felt it ripe for the creation of a new community, using Bear Valley water. In 1890 he formed the Bear Valley and Alessandro Development Company to purchase the tract. This new company also acquired five-ninths of the stock of the Bear Valley Land and Water Company. This acquisition was one of a number of complex financial maneuvers in which the majority stock of one company was purchased by another, and another, until the largest related company controlled each.¹⁶ With the excess water from Bear Valley, Brown planned to turn this arid tract into an agricultural wonderland, just as he had done with Redlands.

He found new investors to finance the development of the tract as well as the construction of the new dam and the pipelines necessary to bring the water across Mill Creek and San Timoteo Canyons. Work on the new pipelines commenced in early 1890. In December, 1890, Brown's newest corporation, the Bear Valley Irrigation Company acquired the reservoir, lands, ditches, and other property of the Bear Valley Land and Water Company, and all of the lands of the Bear Valley and Alessandro Development Company. With this scheme, the Bear Valley Irrigation Company called the shots for every company working on the project.

The new town sites of Alessandro and Moreno in the tract were named for characters in Helen Hunt Jackson's famed and influential novel *Ramona: A Story*. Jackson's book, an immediate hit with American readers when it was published in the mid-1880s, created a fascination with a romanticized view of the mission and rancho periods in California history. Thousands of easterners and mid-westerners traveled to California well into the twentieth century to capture moments of the book for themselves. As such, the names of the two tracks would strike a familiar and popular chord with potential settlers. The sale of land moved swiftly; more than 7,000 acres with water rights were purchased on selection day, October 15, 1890. *The Facts of Redlands* reported that "Had not Redlands experienced so remarkable a growth, it is not probable that so wonderful a success would have been achieved as is now being placed to the credit of the Bear Valley and Alessandro Development Company... it is becoming evident that Alessandro is to be a second Redlands..."¹⁷

Business was good and Frank Brown was about to realize his dreams. Construction of the new dam began in July, 1891. To photograph the brilliant future of his expanding domain, Brown commissioned Southern California landscape photographer Herve Friend. Friend arrived in Redlands in August, 1891.

As a photographer with considerable artistic skill, Herve Friend was especially well-suited for the project. His major pictorial work, *Picturesque Los Angeles County, California: Illustrative and Descrip-*

tive had been published in 1887. The beautifully bound book featured dozens of stunning landscape views of the greater Los Angeles basin, reproduced by the expensive photogravure process. “It was singular in the genre of booster literature designed to increase the flow of tourists to the region throughout the year, a genre that increasingly relied on photography to sell the landscape and climate of Southern California.”¹⁸ In his introduction to the album, Friend wrote that he wanted to “familiarize the tourist and resident with localities as will excite an interest in them to seek out and enjoy with the author the many gems of natural scenery far and away among the mountains and cañons.” It was exactly this kind of interest that the Bear Valley Irrigation Company hoped to excite in potential investors.

Friend’s mission was to document the expansion of the dam and the water delivery system to Moreno and Alessandro, as well as show the success that was Redlands. The board of the Bear Valley Irrigation Company intended to circulate the photographs to people in the East so “that prospective investors can have an opportunity of seeing what our country is like.”¹⁹ The hope, of course, was that men with means would see the wonderful prospects and potential returns available to them in the new endeavor.

Friend’s trek to Bear Valley from Redlands began in the first week of August. The photographer was accompanied by J. S. Black and Stephen Rogers. J. S. Black, an engineer recently arrived from New Haven, Connecticut, was responsible for the details of the plans for the new dam.²⁰ Both Black and Rogers knew Bear Valley and the lake well and would be

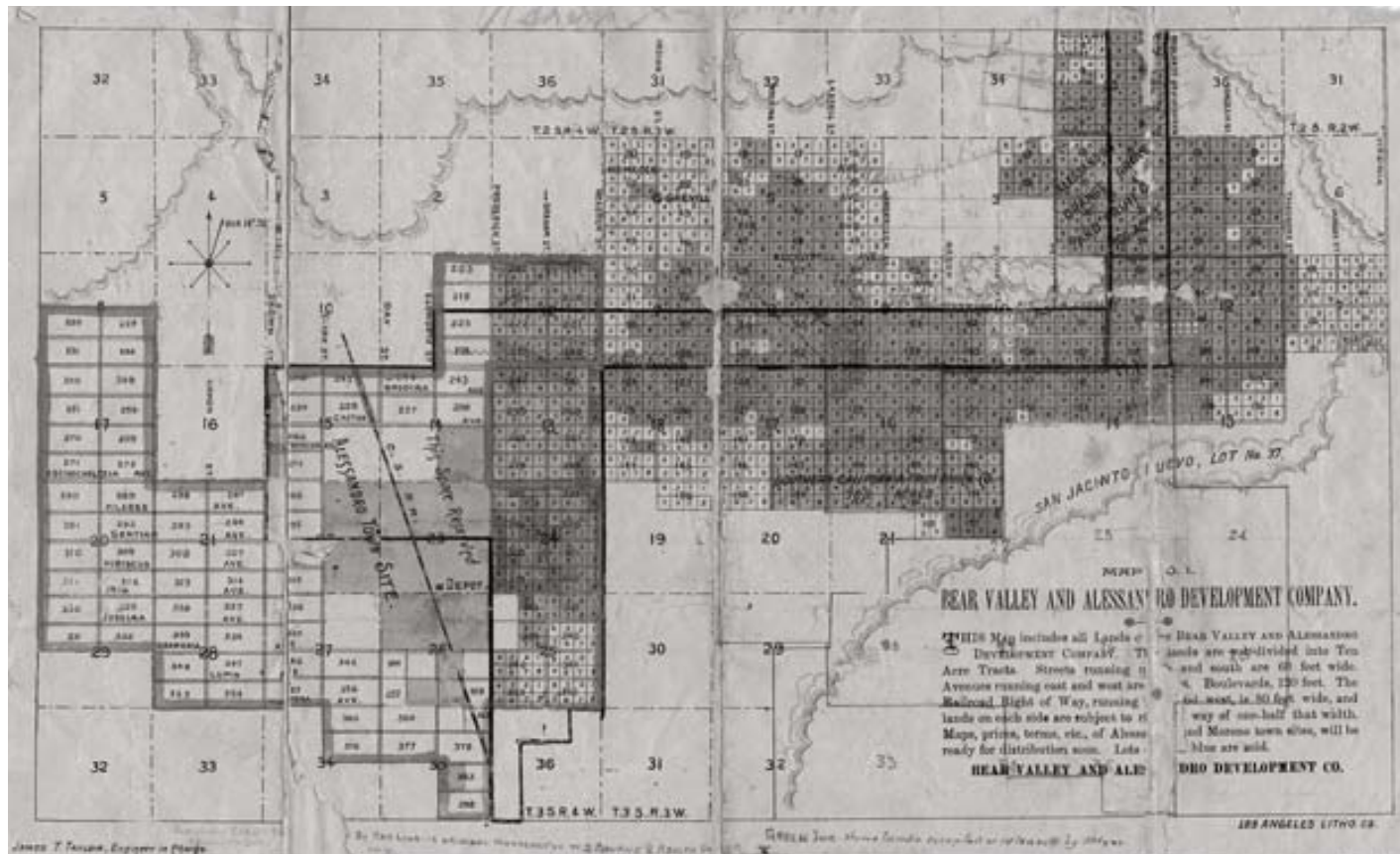


Fig. 6 *Map of Bear Valley and Alessandro Development Company, 1890. Courtesy of A.K. Smiley Public Library.*

capable guides for Friend. The threesome set out with a train of seven burros to carry their supplies,²¹ including a large-format camera and the dozens of 14 x 17 inch glass plate negatives they would need.

Only a few days after work had commenced, tragedy struck. One of the expedition's small row-boats went missing on Bear Valley Lake. At about 11 o'clock on the morning of August 8 the three men saw a boat which they were convinced was their missing craft; it was piloted by a twenty-year-old Portuguese man named Joaquin Garcia. In another boat Rogers rowed out to investigate. Shortly, Friend and Black heard an unexpected sound: Friend thought it was the blow of an oar, Black the beaching of the boat. Five minutes later they heard a cry for help. From the water's edge, they saw a man clinging to a tree branch floating about 300 yards offshore as well as two empty boats. Another boat passing nearby managed to rescue the man adrift on the tree limb. It was Garcia. Rogers was gone.

Garcia was taken into custody and charged with the murder of Stephen Rogers. The drowned man's body was not recovered until August 12. The murder investigation revealed that after Rogers had accused Garcia of stealing the boat, the two had argued, and Garcia had struck Rogers, probably with one of the oars. Both had been knocked into the lake, and Rogers, incapacitated by the blow, had drowned. Garcia's boat and the one loaned to Friend and his party had been identical boats owned by the Bear Valley Gun Club. Ironically, Friend had captured a photograph of Garcia in his boat near Gilner's Point on the southern shore of the lake shortly before the incident with Rogers. Garcia was ordered to stand trial in Superior Court. The proceedings began October 7, 1891, and on the 10th the jury rendered a verdict of not guilty.

Despite the tragedy, Herve Friend continued to photograph Bear Valley, Redlands, and the Moreno Valley. He made at least three trips to Bear Valley throughout August and September. *The Facts* described Friend's work in an article on September 25:

The work which has been done for the Bear Valley Company by Messrs. Friend and Black in photographing the country is now in the

shape to be seen. The views are finely executed, and there are varied scenes of the country from Bear Valley to Alessandro.

The views of Bear Valley are the best ever taken...The pictures of Redlands are works of art... Crafton, the zanja, the Alessandro pipeline, all the reservoirs, the Alessandro tract, the town of Moreno, are each made the subject of a series of views.²²

In the tradition of American landscape photographers such as Carleton Watkins and Eadweard Muybridge, Friend created a grand vision of the landscape of Bear Valley and the communities it watered. Like his predecessors he successfully merged artistic and commercial imperatives. Included were scenes of Bear Valley Lake, the original dam, flume construction, the San Jacinto Plains, and Redlands. His sweeping vistas of valleys, canyons, towns and fields show a mastery of composition and an understanding of the play of light and shadow. His darkroom techniques, including the clearing of skies with heavy dark paper cut along the mountain ridgeline, are demonstrated in some of the surviving negatives. At a time when most photographers in Southern California were absorbed with portrait photography or basic landscape views, Friend elevated his work beyond the merely documentary. Large albums of his 14 x 17 inch contact prints as well as individual prints were distributed by the Bear Valley Irrigation Company to potential investors across the country and, very likely, in Europe. While records are unclear as to the number of albums created, two are known to exist as of this writing. One is held by A.K. Smiley Public Library in Redlands; the other is the subject of this catalog. Friend also made a series of 8 x 10 inch views similar to the mammoth views; these smaller images focused principally on Redlands. Friend's work, undoubtedly, comprises the best photographic record of Big Bear Lake, Redlands, and Moreno Valley of this period.

Unfortunately for Frank Brown, his investors, and the settlers on the San Jacinto Plains, these golden days of the Bear Valley Irrigation Company were to be short-lived. As lots were sold and water

certificates issued, the company continued to increase its obligations for water delivery. Yet, by mid-1892, the new dam and flumes were not completed. Brown attempted to persuade the company board, which had previously raised dividends from ten to fifteen percent against his objections, to reduce them so that the money could be used to complete the projects. To make matters worse, rainfall between 1891 and 1893 was lower than anticipated. Brown had relied on eight years of recorded rainfall to calculate future patterns, simply not long enough to accurately foresee rainfall in a region where wet-dry cycles are anything but predictable. The 1890 *Scribner's* article had warned that "the efficiency of any system of water-storage is measured by the very smallest amount of water stored in the very driest year."²³ Reservoir levels dropped to previously unseen lows. In the face of this discouraging scenario new investment funds dried up as well, and capital that should have been used for construction now had to be devoted in ever larger amounts to paying dividends.²⁴

Because of inadequate construction funds work on the Alessandro tunnel and the new dam ceased in the summer of 1892. Seeing a decline he was powerless to stop, Frank Brown severed his ties with the entire enterprise.²⁵ He resigned as the company's chief engineer in October, 1892, and from the Board of Directors the following April and liquidated his holdings in the company.

By the end of 1893, the situation went from bad to worse. The continued insistence on high dividends, the meager water levels in the reservoir, and too many obligations for water delivery brought the Bear Valley Irrigation Company to its knees. A suit was brought against the company for failure to meet its delivery obligations and in December, 1893, the company was placed into receivership. With that Brown lost his standing in the community. He left Redlands, *persona non grata*, blamed for the failure of the company even though events were beyond his control. In 1903 the company's remaining assets, including the reservoir and water lines to Redlands, as well as other local Redlands water companies, were reorganized and consolidated into the new Bear Valley Mutual Water Company,



which continues to provide water to the east San Bernardino Valley today.

The new dam to enlarge the reservoir at Bear Valley was finally completed some twenty years after Herve Friend made the long trek into the mountains to create a photographic legacy of the Bear Valley Irrigation Company. Although Frank Brown, the civil engineer responsible for harnessing water for a thirsty valley and turning the Redlands district into the "Washington Navel Orange Growing Capital of the World," was unable to fulfill his final plans for Bear Valley, Herve Friend's photographs testify to Brown's dreams and to the growth and prosperity that transformed Southern California when water was successfully wrested from natural cycles.

Fig. 7 *Redlands from Cajon Street Schoolhouse looking west.*

Notes

1. Scipio Craig, ed. *The Citrograph*, November 26, 1887, 4.
2. Carey McWilliams, *Southern California Country: An Island on the Land* (New York: Duell, Sloan & Pearce, 1946) 38.
3. *Redlands Golden Jubilee* (Redlands: Citrograph Printing Company: 1938) 6-7.
4. Ibid.
5. McWilliams, 6.
6. Ibid, 185.
7. Walter Gillette Bates, "Water-Storage in the West," *Scribner's Magazine*, January 1890, 10-11.
8. *Redlands Golden Jubilee*, 7.
9. Ibid, 8.
10. Frank E. Brown quoted in Lawrence E. Nelson, *Only One Redlands: Changing Patterns in a Southern California Town* (Redlands: Redlands Community Music Association, 1963) 20.
11. *Redlands Golden Jubilee*, 8.
12. Larry Burgess, *Redlands: Remembrance and Reflection* (Redlands: Redlands Federal Savings, 1981) 7.
13. *Redlands Golden Jubilee* 9.
14. *The Citrograph*, November 27, 1888.
15. "The Water Supply" *The Facts*, October 23, 1890.
16. Robert Myles Hertzberg "The Catalyst and the King: Frank E. Brown & East San Bernardino Valley Water Development 1877-1893" unpublished honors thesis, University of Redlands, 1976, 79-83.
17. "Alessandro: Seven Thousand Acres of Land Sold. A Coming City" *The Facts*, October 23, 1890.
18. Victoria Dailey, Michael Dawson, William Deverell, and Natalie Shivers, *LA's Early Moderns* (Glendale: Balcony Press, 2003) 228.
19. "Pictures" *The Facts*, September 25, 1891.
20. *The Orange Belt*, August, 1891.
21. *The Citrograph*, August 8, 1891.
22. "Pictures."
23. Bates, 11.
24. Hertzberg, 92-95.
25. Ibid, 96.





Plate 1 *View of Redlands with Orange Grove.*



Plate 2 *Redlands from Cajon Street Schoolhouse.*



Plate 3 *Hillside or Terrace Irrigation.*



Plate 4 *View on Sylvan Boulevard, Redlands.*



Plate 5 *Irrigating a young orange orchard.*



Plate 6 *Bear Valley Reservoir looking south.*



Plate 7 *Bear Valley Reservoir from south shore.*



Plate 8 *Untitled [Bear Valley Reservoir].*



Plate 9 *Dam site
in Santa Ana River
area near junction
with Cold Creek.*



Plate 10 *View of Santa Ana Canyon above dam site showing part to be submerged.*



Plate 11 *Reclaimed from the desert—effect of Bear Valley water.*



Plate 12 *Alessandro Tract looking west from head of Redlands Boulevard showing distributing reservoir and engineer's headquarters.*



Plate 13 *Alessandro Tract looking west from Moreno Hills.*



Plate 14 *Alessandro Tract looking northwest from mountains southeast of Moreno.*



Plate 15 *Alessandro Tract looking northeast from mountains southeast of Moreno.*



Fig. 8 *Composite panorama of Alessandro Tract (Moreno Valley), made from plates 13, 14, and 15. Photographed by Herve Friend, 1891.*



Fig. 9 *Composite panorama of Moreno Valley, made from three images. Photographed by William Short, 2005.*

Checklist of Photographs

All photographs are vintage albumen prints, mounted to album pages.

Front Cover *Reflections from nature, Bear Valley Reservoir.* 12¼ x 16⅜ inches.

TEXT FIGURES

- Fig. 1** *Redlands from Smiley Hill.* 13 x 16⅜ inches.
Fig. 2 *Bear Valley and reservoir.* 15⅝ x 13 inches.
Fig. 3 *View on Mill Creek Rd. Mts. San Bernadino and Gray Back in distance.* 13 x 16⅜ inches.
Fig. 4 *Untitled [Home in Redlands].* 8⅞ x 16 inches.
Fig. 5 *Alessandro tract from San Timoteo Hills.* 10 x 16⅜ inches.
Fig. 6 *Map of Bear Valley and Alessandro Development Company, 1890. Courtesy of A.K. Smiley Public Library.*
Fig. 7 *Redlands from Cajon Street Schoolhouse looking west.* 13 x 16⅜ inches.
Fig. 8 *Composite panorama of Alessandro Tract (Moreno Valley), made from plates 13, 14, and 15.*
Fig. 9 *Composite panorama of Moreno Valley, made from three images. Photographed by William Short, 2005.*

PLATES

- Plate 1** *View of Redlands with Orange Grove..* 12⅜ x 16⅜ inches.
Plate 2 *Redlands from Cajon Street Schoolhouse.* 11⅜ x 16¼ inches.
Plate 3 *Hillside or Terrace Irrigation.* 13⅝ x 16⅝ inches.
Plate 4 *View on Sylvan Boulevard, Redlands.* 13 x 16¼ inches.
Plate 5 *Irrigating a young orange orchard.* 13⅙ x 16⅝ inches.
Plate 6 *Bear Valley Reservoir looking south.* 11⅞ x 15⅙ inches.
Plate 7 *Bear Valley Reservoir from south shore.* 12⅝ x 16¼ inches.
Plate 8 *Untitled [Bear Valley Reservoir].* 12⅓⅙ x 16½ inches.
Plate 9 *Dam site in Santa Ana River area near junction with Cold Creek.* 16⅞ x 12⅙ inches.
Plate 10 *View of Santa Ana Canyon above dam site showing part to be submerged.* 11⅞ x 16⅞ inches.
Plate 11 *Reclaimed from the desert—effect of Bear Valley water.* 13⅙ x 16½ inches.
Plate 12 *Alessandro Tract looking west from head of Redlands Boulevard showing distributing reservoir and engineer's headquarters.* 13 x 16⅞ inches.
Plate 13 *Alessandro Tract looking west from Moreno Hills.* 13⅙ x 16⅞ inches.
Plate 14 *Alessandro Tract looking northwest from mountains southeast of Moreno.* 13⅙ x 16⅝ inches.
Plate 15 *Alessandro Tract looking northeast from mountains southeast of Moreno.* 13⅙ x 16½ inches.

Back Cover *Bear Valley Reservoir from Gilner's Point.* 11⅝ x 16¼ inches.



Michael Dawson Gallery
535 North Larchmont Boulevard
Los Angeles, California 90004
Tel: (323) 469-2186 Fax: (323) 469-9553
www.michaeldawsongallery.com

Paul M. Hertzmann, Inc.
Post Office Box 40447
San Francisco, California 94140
Tel: (415) 626-2677 Fax: (415) 552-4160
E-mail: pmhi@hertzmann.net