

*Bandelier, The Life and Adventures of Adolph Bandelier*, by Charles H. Lange and Carroll L. Riley, The University of Utah Press, Salt lake City, Utah, \$34.95, xiv, 263 pages, 3 maps, 28 illus., index.

Reviewed by

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Adolph F. Bandelier (1840-1914) is best known for his work in the Southwestern United States, particularly among the pueblos and prehistoric sites of the Rio Grande area, although he did extensive field and archival research in Mexico and South America as well. Self-taught, like most of his contemporaries, his research included archaeology, ethnology, history, and geography, plus a serious interest in botany, zoology, and meteorology.

Bandelier was born in Bern, Switzerland, but when he was eight his family moved to the largely Swiss settlement of Highland, Illinois, 30 miles east of St. Louis, where he attended school, was tutored privately, and taught by his well educated mother. He mastered German and English, as well as his native French, and later added Spanish and Latin. For many years he worked in his father's general store, finally, at the age of forty, making the difficult decision to devote himself to scholarship rather than business. In 1869 at the St. Louis Mercantile Library he had begun the study of prehistoric Mexican cultures. He met Lewis Henry Morgan on a trip to the east and for many years was greatly influenced by his view of cultural evolution, but he remained far more fact oriented than concerned with theory. Bandelier's first major work, "On the Art of War and Mode of Warfare of the Ancient Mexicans," was published in 1877 by the Peabody Museum of Harvard.

In 1880 he found the financial and institutional support he needed for a new career, with funding by the newly created Archaeological Institute of America (AIA) for research in New Mexico. He made his headquarters in Santa Fe and proved an indefatigable field man, taking voluminous notes on the pueblos he visited and making detailed notes and precisely measured plans of ruin after ruin (years later A. V. Kidder praised his work at Pecos for its accuracy and completeness). Usually on foot, sometimes on horseback, he spent long days visiting pueblos and recording ruins throughout the area.

The next year the AIA sent Bandelier to Mexico to assist Charnay at Palenque but the expedition had already ended (Bandelier wrote "Charnay is as mad as a march hare"). Instead, Bandelier explored ruins and transcribed church archives, although nearly constantly ill with chills, fever, and diarrhea (he treated himself with opium, acetate of lead, pepsin, and bismuth).

He had a long and happy marriage to Josephine ("Joe") Huegy, of another Swiss family in Highland, only ending with her death in Peru in 1892. Not long after that he married Fanny Ritter, also Swiss by birth and nearly 30 years his junior. She proved an invaluable research partner in his later years, taking dictation when his hands gradually became crippled and reading to him as his eyesight failed.

From 1882 to 1884 he continued his research in the Southwest, including a hazardous horseback trip through the Sierra Madre of Mexico, a trip the U.S. army had warned him against because of Apaches in the area. From 1886 to 1889 he was "historiographer" of the Hemenway Expedition and his interest shifted increasingly to documentary research. In 1892 he went to Peru and Bolivia to collect antiquities for the financier Henry Villard, much of the time with Charles Lummis, the newspaperman, author, and founder of the Southwest Museum. When Villard's support failed his collecting was supported by the American Mu-

seum of Natural History. He remained in South America for eleven years, compiling extensive notes on the many sites he visited, including Tiahuanaco, Chanchan and Pachacamac.

Bandelier's last three supporters were successively Columbia University, the Hispanic Society of America, and the Carnegie Institution of Washington. For the Carnegie he went to Spain for archival research in Seville and it was there that he died in 1914. Throughout his career he was constantly in precarious financial straits, always searching for ways to support himself, yet continuing to work indefatigably and to publish a substantial volume of scholarly reports. It is typical of his tireless approach to fieldwork that when he visited Cushing at Zuni in 1883 he walked the 30 miles from the nearest railroad stop to the pueblo. Part of his success was due to his ability to make friends and secure their support everywhere he went. Again and again, however, as the authors point out, he was in financial difficulties and "begged, borrowed, or scrounged."

Bandelier's career and personal life are excellently chronicled in the volume here reviewed, based on a scrupulous examination of a vast number of often obscure sources. It goes far beyond the authors' excellent *The Southwestern Journals of Adolph F. Bandelier* (in four volumes, 1966-84), and provides an full account Bandelier's achievements and tribulations. Repeatedly the authors add valuable background information on people, institutions, and places, to assist the reader in appreciating the circumstances of Bandelier's career or of specific activities. They fairly evaluate his achievements in the perspective of his time. In archaeology there was little or no awareness of chronology and of the significance of ceramic differences. In ethnology the compilation of isolated facts was the practice of the time.

This biography can be read as a major contribution to the history of archaeology and also as a fascinating account of a remarkable person who overcame constant difficulties to achieve his scholarly ambitions. The photographic illustrations are excellent but the book would have benefited from more, and better, maps, and perhaps a chronology of Bandelier's always changing affiliations and constant travels. A useful and impressive appendix (pages 239-251) lists all of his publications, Bandelier review in four languages. All in all, this fine biography should restore to his rightful place a pioneer in archaeological, ethnological, and documentary research in the New World.

*History of Science in the United States: A Chronology and Research Guide*, by Clark A. Elliott, Garland Reference Library of the Humanities Vol. 1711, Garland Publishing, New York, 1996. x + 543 pp., index. \$83.00.

Reviewed by

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There are four parts to this volume - a chronology of events by year, a chronology of leading scientists grouped by the decade in which they reached 25 years of age, a research guide, and a research bibliography. The author has written extensively on American science, including co-editing the volume *Science at Harvard University* (reviewed in BHA 2(1):17-19).

The volume covers mostly what are termed the "hard" sciences (-e., chemistry, biology, geology, etc.) and touches upon the social sciences only rarely. The chronology, that takes up two thirds of the book, extends from ca. 1493 to 1990 and includes only three archaeological events. An example of these entries follows: