

Research Bibliography for Students in History 450  
The Growth of Metropolitan Milwaukee  
Prof. Amanda Seligman  
Department of History  
University of Wisconsin-Milwaukee  
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A list of primary and secondary sources related to the first official United States weather  
forecast, issued on November 8, 1870

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Nov. 8<sup>th</sup> 1870

To Observers along the Lakes  
Bulletin this at once

Noon Chicago Nov 8. 1870

A High wind all day yesterday at  
Chayenne and Omaha. A very high  
wind reported this morning at Omaha.

Barometer falling with high wind at  
Chicago and Milwaukee to day. Barometers  
falling & thermometer rising at Chicago, Detroit  
Toledo Cleveland Buffalo & Rochester.

High Winds probable along the lakes.

J. Mackintosh  
Observer

Source: Box 19, Folder 1: Weather Bureau Reports and Labels 1870-1871, Increase A. Lapham papers, 1825-1930, Wisconsin Historical Society

<http://content.wisconsinhistory.org/cdm/compoundobject/collection/p15932coll7/id/21884/rec/7>

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## Summary

The first official weather forecast in US history was delivered by the efforts of Increase Lapham and his colleagues at Milwaukee on November 8, 1870. At the time, Lapham was in Chicago working for what became the National Weather Service. The report concerned weather conditions on the Great Lakes as they pertained to Great Lakes shipping. This report marked the beginning of the National Weather Service and is thus significant for the history of American meteorology. This event occurred in the context of the massive post-Civil War economic boom, which led to the industrialization of the United States, a great increase in population, immigration, commerce, the specialization and professionalization of many scientific fields, the founding and funding of many American universities, and the emergence of an urban, college-trained professional class. In the same period, the various federal “homestead” acts and the agricultural bent of the new “land-grant” universities sought to transform as many Americans as possible into farmers and to apply scientific professionalism to farming. Some citizens embraced the new professionalism and science, hailing it as progress and viewing it with boundless optimism, while others resisted.

Milwaukee began as a Native American village, called *Minowaki* (“Good Land” or “Good Country” in Ojibwe because of its rich soil and because the climate near the Lake Michigan offered more frost-free days for the Indigenous people to grow corn and other crops. Starting in the 1780s, Milwaukee became a fur-trade community dominated by the Métis, a people of mixed European and Indigenous heritage, and then an American settlement from the mid-1830s onward. By 1870 many Indigenous people remained in Milwaukee, many having returned despite being forcibly subjected to earlier processes of “removal” by the U.S. government. Many were allowed to remain on their lands, particularly if they were Christian and of mixed ancestry. A small free black population established itself, helped along by strong anti-slavery attitudes among Milwaukee’s elite, many of whom were Yankee-Yorkers. Farm women and other American women began to agitate for greater opportunities inside and outside the home, and Wisconsin experienced economic fluctuations as the state shifted from producing grain to producing dairy.

The “Storm Signal Station,” as it was called in 1870, was an attempt to use a new technology to deal with an old problem, the frequency of November Great Lakes storms. The immediate impulse for its creation was the terrible storms of November 1869, in which a record number of ships and their cargoes were lost.

## Newspaper Coverage

Reading newspaper coverage of events as they occurred is an excellent way to get a view of how contemporaries understood them. These articles were accessed through the database called [Nineteenth Century U.S. Newspapers](#), available through the UWM Libraries.

To search for the relevant newspaper articles, first go to the UWM Libraries webpage and log in to your library account with your regular UWM credentials. Then go to “Databases A-Z” and search for “newspaper.” In the results you should see “Nineteenth Century US Newspapers.” Click on it. Once you get to it, do an advanced search under the main search bar. I did a search for “Lapham,” “Storm Signal,” and “Storm Signal Station.” You can also search for Mitchell to track down the citations for Alexander Mitchell. The weather report was referred to as a storm signal report in the original newspapers; it is important to do a search on original terminology to find what you need. You can specify a date range in the search. I did 1860-1870, and you can specify what publications you want to search. I checked the boxes for all of the publications in the database from Milwaukee and Wisconsin.

In addition to these newspaper articles, you might find it useful to peruse the file of Weather Bureau clippings, in the Increase Lapham papers, at <https://content.wisconsinhistory.org/digital/collection/p15932coll7/id/21710/rec/4>.

“City Matters.” *Milwaukee Daily Sentinel*, 2 Nov. 1870. Nineteenth Century U.S. Newspapers, <https://link.gale.com/apps/doc/GT3009114859/NCNP?u=milwaukee&sid=NCNP&xid=666886fc>.

“Dr. Lapham on Storm Signals.” *Milwaukee Daily Sentinel*, 18 Jan. 1870. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009706692/NCNP?u=milwaukee&sid=NCNP&xid=97a79966>.

“Marine Disasters.” *Milwaukee Daily Sentinel*, 11 Jan. 1870. Nineteenth Century U.S. Newspapers, <https://link.gale.com/apps/doc/GT3009111467/NCNP?u=milwaukee&sid=NCNP&xid=d7e6c87c>.

“Meteorological Observations on the Lakes.” *Milwaukee Daily Sentinel*, 25 Mar. 1870. Nineteenth Century U.S. Newspapers, <https://link.gale.com/apps/doc/GT3009708818/NCNP?u=milwaukee&sid=NCNP&xid=906198ac>.

“Milwaukee Storm-Signal Station.” *Milwaukee Daily Sentinel*, 14 Oct. 1870. Nineteenth Century U. S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009115727/NCNP?u=milwaukee&sid=NCNP&xid=82613dd8>.

“Storm Signals.” *Milwaukee Daily Sentinel*, 17 Oct. 1870. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009115841/NCNP?u=milwaukee&sid=NCNP&xid=2c084c92>.

“Storm Signals.” *Milwaukee Daily Sentinel*, 31 Jan. 1870. Nineteenth Century U.S. Newspapers, <https://link.gale.com/apps/doc/GT3009112251/NCNP?u=milwaukee&sid=NCNP&xid=70145a19>.

“The System of Storm Signals, Which Went into Operation the First of This Month, Promises to Be of Great Advantage to Commerce.” *Milwaukee Daily Sentinel*, 12 Nov. 1870. Nineteenth Century U.S. Newspapers, <https://link.gale.com/apps/doc/GT3009115035/NCNP?u=milwaukee&sid=NCNP&xid=58b417cc>.

“The Value of Storm Warnings.” *Milwaukee Daily Sentinel*, 25 Oct. 1870. Nineteenth Century U.S. Newspapers, <https://link.gale.com/apps/doc/GT3009710341/NCNP?u=milwaukee&sid=NCNP&xid=da7c73a>.

## Increase Lapham

Increase Allen Lapham is often touted as Milwaukee's first scientist and an early chronicler of Wisconsin. Many landmarks in Milwaukee and southern Wisconsin are named for him. Born in upstate New York into a Puritan English family (his ancestors and siblings had now unfamiliar names like Seneca and Pazzi), he made his way west working in the family business of canal engineering. With the help of Byron Kilbourn, Lapham decided to make Milwaukee his permanent home and became a naturalist there.

Lapham, responsible for the inauguration of the National Weather Service at Milwaukee, the founding of Milwaukee-Downer College, and the Wisconsin Historical Society, as well as many other institutions, seems to have had two contradictory impulses in his character. He was an ardent conservationist, opening the way for later Wisconsin naturalists like Aldo Leopold and John Muir. He advocated for the conservation of Indian mounds and Wisconsin forests. Yet at the same time, he must have known that his reports and information would contribute to the settlement and development of the state and the capitalist exploitation of its natural resources.

### *Primary Sources*

Increase A. Lapham Papers, 1825-1930, Wisconsin Historical Society,

<http://content.wisconsinhistory.org/cdm/landingpage/collection/p15932coll7>

Lapham, Increase Allen, Joseph Gillett Knapp, and H Crocker. *Report on the Disastrous Effects of the Destruction of Forest Trees, Now Going On So Rapidly in the State of Wisconsin*. Madison, WI: Commission to Ascertain Effects of the Destruction of Forest Trees, 1867.

Access [online](#) or in the stacks of the UWM Libraries

### *Secondary Sources*

Bergland, Martha, and Paul G Hayes, *Studying Wisconsin: The Life of Increase Lapham, Early Chronicler of Plants, Rocks, Rivers, Mounds and All Things Wisconsin*. Madison, WI: Wisconsin Historical Society Press, 2014.

A definitive biography of Lapham, though its viewpoint ought to be examined for its uncritical acceptance of the Euro-American settlement narrative and its somewhat rosy view of Lapham. To be fair, the authors point out these faults in their introduction.

Online access and physical copy at UWM Libraries. Also a course textbook.

Bergland, Martha. "A Man for All Seasons." *Milwaukee Magazine*. September 28, 2009.

<https://www.milwaukeeemag.com/AManforAllSeasons/>.

Hayes, Paul G., and Martha Bergland. "Increase Lapham & Lorine Niedecker: A Paper Delivered at the Lorine Niedecker Wisconsin Poetry Festival 11 October 2014." Lorine Niedecker Wisconsin Poetry Festival, October 11, 2014. Fairwater, WI: What Region, 2015.

Access through the UWM Libraries catalog

An essay on the poetic connections between Lapham and Lorine Niedecker, a twentieth century poet often called a Wisconsinite Emily Dickinson. Niedecker did research for a biography she wanted to write of Lapham and put his name in her poem "Asa Gray Wrote Increase Lapham."

Hawks, Graham Parker. "Increase A. Lapham, Wisconsin's First Scientist." PhD diss.: University of Wisconsin-Madison, 1960.

Access through the UWM Libraries catalog.

Kleinman, Lynne H. "Milwaukee-Downer College: A Study in the History of Women and the History of Higher Education in America, 1851-1964," PhD diss., University of Wisconsin-Milwaukee, 1991.

Online Access through UWM Libraries

Focus on the introduction and chapter 1 for mentions of Lapham. You might also read Chapter 2 if you are interested in the history of women's college education. Catherine Beecher, one of the founders of Milwaukee-Downer college, believed firmly in "separate spheres" for men and women: if women could be fitted for their sphere through higher education to be nurses, teachers, social workers, etc. they could be the moral guardians of men, better wives and mothers, and the preservers of national unity and American democracy. Increase Lapham, one of the contributors to Milwaukee-Downer College, believed differently: that the curricula in a women's college should be the same as in men's colleges, because men and women should be equal and intellectual equality would produce more compatible marriages, drawing on the example of his own marriage to Ann.

Olmsted, James D. "Increase Lapham and the Roots of Environmentalism in Wisconsin." MA thesis, University of Wisconsin-Milwaukee, 1996.

### *Newspaper articles*

"Dr. Lapham." *Milwaukee Daily Sentinel*, 17 May 1875, p. 8. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3001909517/NCNP?u=milwaukee&sid=NCNP&xid=262791b9>.

A tribute to Lapham from E.D. Holton, wherein Holton also discusses the formation of the “signal service” and (humorously) mentions that Lapham was shorter than he.

“Legislative.” *Milwaukee Sentinel*, 29 Dec. 1840. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3013900492/NCNP?u=milwaukee&sid=NCNP&xid=0436180a>.

“Legislative” discusses Byron Kilbourn’s approval of a loan for the building of a canal in Milwaukee and mentions that he wrote a letter to Milwaukee for that purpose, while working in Sandusky, Ohio.

“Milwaukee Lyceum.” *Milwaukee Sentinel*, 12 Jan. 1841. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3013902139/NCNP?u=milwaukee&sid=NCNP&xid=56b3a378>.

Lapham and the Milwaukee Lyceum begin unofficial “weather reports.”

Lapham, I. A. “Territorial.” *Milwaukee Sentinel*, February 3, 1844. Nineteenth Century U.S. Newspapers. <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3003248050/NCNP?u=milwaukee&sid=NCNP&xid=9210d2d9>.

A letter to the paper from Lapham about his early canal work.

“Water Works.” *Milwaukee Daily Sentinel*, August 4, 1870. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009109189/NCNP?u=milwaukee&sid=NCNP&xid=29e12e0f>.

Lapham’s opinion about whether lakes outside the city of Milwaukee, in the immediate vicinity, could furnish a water supply for the city. His answer is mostly a no.

“Milwaukee Female College.” *Milwaukee Daily Sentinel*, 18 Feb. 1870. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009110874/NCNP?u=milwaukee&sid=NCNP&xid=b385af3f>.

Lapham mentioned as a trustee of “Milwaukee Female College” (later Milwaukee-Downer College).

“Wisconsin Academy of Sciences, Arts and Letters: A Brilliant Beginning” *Milwaukee Daily Sentinel*, 26 July 1870. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009110874/NCNP?u=milwaukee&sid=NCNP&xid=b385af3f>.

[com.ezproxy.lib.uwm.edu/apps/doc/GT3009707414/NCNP?u=milwaukee&sid=NCNP&xid=a63ee1b6](https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3009707414/NCNP?u=milwaukee&sid=NCNP&xid=a63ee1b6).

Notes on the first meeting of this Academy at Milwaukee. Lapham discusses Lake Michigan fish and the geology of Devil's Lake.

"Abstract of Meteorological Observations Mad [sic] at Milwaukee for April 1849, by I. A. Lapham." *Milwaukee Daily Sentinel*, May 3, 1849. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3001832492/NCNP?u=milwaukee&sid=NCNP&xid=159dd540>.

"Mr. Laphams [sic] Lecture." *Milwaukee Daily Sentinel*, 15 Feb. 1848. Nineteenth Century U.S. Newspapers, <https://link-gale-com.ezproxy.lib.uwm.edu/apps/doc/GT3002853661/NCNP?u=milwaukee&sid=NCNP&xid=bb1498fa>.

Wisconsin geology, with an emphasis on Dodge County.

"Protection for the Families of Drunkards." *Milwaukee Daily Sentinel*, February 26, 1869. Nineteenth Century U.S. Newspapers, <https://go-gale-com.ezproxy.lib.uwm.edu/ps/i.do?p=NCNP&u=milwaukee&id=GALE|GT3002091003&v=2.1&it=r&sid=NCNP&asid=89a4f652>.

Authored by Lapham: argues for the right of women married to "drunkards" to administer the husband's estate and sue for loss of income.

## Julia Lapham

Julia Lapham, Increase Lapham's daughter, was an active member of the Wisconsin Historical Society and Waukesha County Historical Society, the Wisconsin Archaeological Society, and the president of the Wisconsin Federation of Women's Clubs. She lived in Oconomowoc and never married, dying of heart disease there on January 2, 1921. Like her father, she maintained an interest in the preservation of Indian mounds and purchased Indian artifacts to preserve them. But Julia Lapham was ambivalent about actual Indian people, having lived through the Dakota War of 1862 on her aunt's Minnesota farm, an experience she recounted for the *Wisconsin Magazine of History*, which also published her obituary. She maintained a correspondence with noted Wisconsin Dells photographer H.H. Bennett and had an interest in the early history and mission work of the Protestant and Anglican Churches in England and America. She is remembered in Oconomowoc as a person who made notable contributions to that town. She was a founder of the Oconomowoc Public Library and served as its second librarian. She preserved much of Oconomowoc's history and was notably the first person in Oconomowoc to receive a telephone call.

### *Primary Sources*

*Bulletin*, Issues 26-35. United States Weather Bureau, Washington D.C.: U.S. Government Printing Office, 1901.

[https://books.google.com/books?id=sctKAAAAMAAJ&newbks=1&newbks\\_redir=0&source=gb\\_s\\_navlinks](https://books.google.com/books?id=sctKAAAAMAAJ&newbks=1&newbks_redir=0&source=gb_s_navlinks)

Page 10 mentions the weather bureau convention of August 1901, held in Milwaukee. Julia and Mary were in attendance and given a special greeting. Page 17-18 mention a speech on the history of the weather service.

Cole, Harry Ellsworth. *A Standard History of Sauk County, Wisconsin*, Vol. 1. Lewis Publishing Company: Chicago, 1918.

Pages 143-5 discuss Julia Lapham's women's club work, in particular the preservation of an Indian mound.

Emerson, Ralph Waldo. *The Letters of Ralph Waldo Emerson*, Vol. 5. New York: Columbia University Press, 1939.

Page 420 of this book mentions a letter of Julia Lapham to Ralph Waldo Emerson, dated July 20, 1865, thanking Emerson for a donation to the Soldiers' Home Fair (a fundraiser for the home's construction). She thanks him for the "little gems" he donates, perhaps copies of his poems.

Gannett, Henry. *The Origin of Certain Place Names in the United States*. Washington D.C.: U.S. Government Printing Office, 1905.

On p. 36 Gannett cites Julia Lapham's research on the origin of the name "Baraboo."

Lapham, Julia. *First Things in Milwaukee Scrapbook*, 1909.

Available at UW Madison.

Lapham, Julia. "The History and Work of the Landmarks Committee in Wisconsin." *Wisconsin Archaeologist* 5 (1905).

Julia Lapham was the chairwoman of this committee.

Stearns, Lutie Eugenia. *Traveling Libraries in Wisconsin, with Directory of Stations*. Madison, WI, Wisconsin Free Library Commission, 1910.

Access through Google Books or online for free in UW Madison's digital collection.

<http://digicoll.library.wisc.edu/cgi-bin/WI/WI-idx?id=WI.TravelLibs>.

Julia is mentioned on page 11.

*The Church Times*, Volumes 8-10. Delavan, WI: Episcopal Church, Diocese of Milwaukee. 1897.

See pp. 234-5.

*Wisconsin Magazine of History*. Vol. 4, 1921.

Pages 222-23 contain her "Recollections of the Sioux Massacre of 1862." Page 361 has her obituary. Available online through UWM, JSTOR, WI Historical Society and Google Books.

*Primary sources related to Julia Lapham housed within Increase Lapham's papers*

Julia Lapham's correspondence and writings are a part of the digitized Increase Lapham papers and span a time from the mid-1800s to her death in 1921.

Box 2, Folder 5: Julia Alcott Lapham Biographical Writings

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/3441>

This folder contains two essays written by Julia Lapham, daughter of Increase Lapham. Both essays cover Increase Lapham's work with weather, storm prediction, and the National Weather Bureau. The first essay titled "Some Early Attempts at Storm Prediction," appeared in the publication *Americana* in June, 1910. The second essay

titled "Facts about Weather Bureau," appears to have been submitted for publication but not printed. The second essay includes a letter to the publication's editor from Julia Lapham.

Box 5, Folder 7: Julia Alcott Lapham Biographical Scrapbook

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/6713>

This folder contains part of a scrapbook assembled by Julia Lapham, on the life of her father. The scrapbook primarily contains newspaper clippings about Lapham's research, correspondence sent to Julia by various individuals regarding her father, pages from articles, and essays by Lapham himself.

Box 5, Folder 5: Julia Lapham Correspondence, 1914-1919

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/6304>

Box 5, Folder 4: Julia Lapham Correspondence, 1910-1913

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/6199>

Box 5, Folder 3: Julia Lapham Correspondence 1905-1909

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/6534>

Box 5, Folder 1: Julia Lapham Correspondence 1897-1899

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/5883>

Box 4, Folder 7: Julia Lapham Correspondence, 1882-1892

Online access,

<http://content.wisconsinhistory.org/cdm/ref/collection/p15932coll7/id/5569>

*Secondary Sources*

Johnson, Jean Lindsay. *Illustrious Oconomowoc*. Oconomowoc: Wisconsin Graphics, 1980.

Available in UWM Stacks

This book mentions Julia Lapham's status as the first person to receive a telephone call in the town, her contributions to a local school, and where she and her sister lived.

McBride, Genevieve G. *On Wisconsin Women: Working for Their Rights from Settlement to Suffrage*. Madison: University of Wisconsin Press, 1993.

Julia Lapham is mentioned briefly on page 193 as the chairwoman of the Wisconsin Federation of Women's Clubs (WFWC)'S Landmarks Preservation Committee.

Nolan, Elizabeth Faulkner, ed. *Landmark*. Waukesha County Historical Society, 1965.

Access via UWM archives.

Julia Lapham is mentioned as the town's first librarian in the 1965 issue.

Rath, Sara. *Pioneer Photographer, Wisconsin's H.H. Bennett*. Madison, WI: Tamarack Press, 1979.

Julia is mentioned on page 83 as having met Bennett through her women's club work, advocating for the Dells and Devil's Lake to be preserved as parks.

## Cleveland Abbé:

Involved in the first official US weather report, Cleveland Abbe is considered a founding member of the National Weather Bureau and one of the nation's first weathermen. Like Lapham and many others involved in the 1870 weather report, Abbe was a Yankee-Yorker who went west. Born in New York City, he graduated from the City College of New York with a Bachelor of Arts and an M.A. in 1860. He attempted to join the Union Army when he was 22 but failed a vision test due to his eye problems and was kept out of war. Therefore, he then studied astronomy at Harvard University and also in Russia, graduating in 1864 with a Bachelor of Science, and became the director of the Cincinnati Observatory in 1868. His first weather bulletin in Cincinnati was issued on September 1, 1869.

In the primary source section, note that Abbe wrote much more than is provided here. This partial list is meant to help you get a sense of his writing during the period under study in this course.

### *Primary Sources*

Brooks, Alfred H. [\*The Geography and Geology of Alaska: A Summary of Existing Knowledge\*](#). Washington: Department of the Interior, United States Geological Survey, 1906.

Online Access through UWM Libraries

Abbe, Cleveland. [\*Report on the Solar Eclipse of July, 1878\*](#). Washington: Govt. Printing Office, 1881.

Access in UWM's American Geographical Society Library

Abbe, Cleveland, Oliver L. Fassig, and Ferdinand Jackson Walz. *Report on the Meteorology of Maryland*. Baltimore: Johns Hopkins Press, 1899.

Access in UWM's American Geographical Society Library, Rare Section

Cleveland Abbe. "[Sun Spots and Earth Temperatures.](#)" *Nature* 4 (85), (1871): 123.

Cleveland Abbe, "[The Structure of the Corona](#)," *Nature* 5 (123) (1872): 367.

Abbe's observations on an eclipse

Abbe, Cleveland. Cleveland Abbe papers, 1850-1954 (bulk 1850-1916).

Cleveland Abbe autobiography in the Cleveland Abbe manuscript collection at the Library of Congress. Online finding aid for the collection of Cleveland Abbe's papers [here](#).

## Secondary Sources

Abbe, Truman. [\*Professor Abbe and the Isobars; the Story of Cleveland Abbe, America's First Weatherman.\*](#) New York: Vantage Press, 1955.

Available through UWM's American Geographical Society Library

Bruce, Robert V. [\*The Launching of Modern American Science, 1846-1876.\*](#) Ithaca, N.Y.: Cornell University Press, 1988.

Online Access through UWM Libraries

This interesting monograph discusses how America's nineteenth century economic boom, territorial expansion and population growth, particularly in the post-Civil War years, led to the professionalization of science, its specialization, and its domination by college-educated, research-oriented men. The same economic boom also led to the proliferation of American universities more generally, vast amounts of cash being poured into existing universities and new ones founded, and a climate where new programs in science, technology and engineering at nineteenth-century American universities challenged a previous academic emphasis on the humanities and Greco-Roman "classics." For our purposes, students will want to read "Part Four: War and Reconstruction, 1861-1876", pages 269-362 (chapters 20-26), although if they really want to be briefer and narrower their focus they should focus on chapters 23-26 (pp. 313-362) only.

Craft, E. "Private Weather Organizations and the Founding of the United States Weather Bureau." *The Journal of Economic History*, 59 (4) (1999): 1063-1071.

Craft, Erik D. "The Value of Weather Information Services for Nineteenth-Century Great Lakes Shipping." *The American Economic Review* 88, no. 5 (1998): 1059-076.

The United States government set up a weather reporting service in 1870; this article uses changes in Great Lakes shipping losses to measure its effectiveness. Almost half of the weather stations on Great Lakes closed in fall of 1883 because of appropriations reductions, permitting estimate of value of the reports. "The results indicate that the social rate of return for weather expenditures during the Weather Bureau's founding period was at least 60 percent."

Fleming, James Rodger. *Meteorology in America, 1800-1870.* Baltimore and London: The Johns Hopkins University Press, 1990.

Available at UWM Libraries Stacks

Description excerpted from Google Books Abstract: Challenging the widely held assumption that meteorologists were mere “data-gatherers” and that U.S. scientists were inferior to their European counterparts, James Rodger Fleming shows how the 1840s debate over the nature and causes of storms led to a “meteorological crusade” that would transform both theory and practice. Centrally located administrators organized hundreds of widely dispersed volunteer and military observers into systematic projects that covered the entire nation. Theorists then used these systems to “observe” weather patterns over large areas, making possible for the first time the compilation of accurate weather charts and maps.

When in 1870 Congress created a federal storm-warning service under the U.S. Army Signal Office, the era of amateur scientists, volunteer observers, and ad hoc organizations came to an end. But the gains had been significant, including advances in natural history and medical geography, and in understanding the general circulation of the earth’s atmosphere.

See especially pages 142-43, 146, 152-53, 156, 161-62.

Heatherington, Norris S. “[Cleveland Abbe and a View of Science in Mid Nineteenth Century America.](#)” *Annals of Science*, 33 (1): 31-49, January 1976.

Online access through UWM Libraries

Henry, Alfred Judson. “Memoir of Cleveland Abbe.” *Annals of the Association of American Geographers* 7 (1917): 61-67, [www.jstor.org/stable/2560791](http://www.jstor.org/stable/2560791).

Online access through UWM Libraries

Majdik, Zoltan P; Carrie Anne Platt, and Mark Meister. “[Calculating the Weather: Deductive Reasoning and Disciplinary Telos in Cleveland Abbe’s Rhetorical Transformation of Meteorology.](#)” *Quarterly Journal of Speech*, 97 (1) (February 2011): 74-9.

Online access through UWM Libraries

Potter, Sean. *Too Near for Dreams: The Story of Cleveland Abbe, America’s First Weather Forecaster*. Boston: American Meteorological Society, 2020.

“[The Weather Bureau and Dr. Cleveland Abbe.](#)” *Science* 48 (1229) (1918): 64-65.

Willis, E., and W. Hooke, “Cleveland Abbe and American Meteorology, 1871-1901. Boston:” *Bulletin of the American Meteorological Society*, 87 (3) (March 2006): 315-326.

Online Access through UWM Libraries

Willis, Edmund P., and William H. Hooke. "Cleveland Abbe and the Birth of the National Weather Service, 1870-1891." *Proceedings of the International Commission on History of Meteorology* 1 (1) (2004): 48-54.

<http://www.meteohistory.org/2004proceedings1.1/pdfs/05willis%26hooke.pdf>

## Farmer

In 1870, the new scientific professionalism, championed by the US government, sought to establish itself in agricultural land-grant colleges, reform the practice of farming, and make as many Americans farmers as possible through “homestead acts.” Some farmers embraced the new professionalism while others demurred. In 1870 Wisconsin was still a world leader in wheat production, though other farmers would soon advocate for a switch to dairy. Hard-line dairy advocates, mainly Yankee-Yorkers, often framed the promotion of Wisconsin dairy in quasi-religious terms: they believed that caring for livestock taught farmers patience and required good moral fiber, unlike wheat cultivation, which they saw as inherently nefarious for its promotion of get-rich-quick schemes, soil exhaustion, and the somewhat morbid fact that high wheat prices in 19<sup>th</sup>-century America were usually the result of agricultural disasters in other parts of the world. Male farmers in 1870 fought for social and political reforms that would improve their economic conditions; female farmers fought equally hard for access to education, culture and self-improvement and a more equal partnership with their husbands.

### *Primary Sources*

Cram, George Franklin. *Cram's Township & Rail Road Map of the North Western States*. Chicago: Geo. F. Cram & Co.: 1870.

<https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~215969~5502270>

Mitchell, Samuel Augustus et al. *County Map of Michigan and Wisconsin*. Philadelphia: Augustus Mitchell, 1870.

<https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~30411~1140450>

Timlin, William Henry. *Autobiography*. Unpublished, 1915.

### Access through UWM Archives

Catalog description: Autobiography of Timlin, a Wisconsin State Supreme Court associate justice (1907-1916), describing 19th-century rural farm life, labor, and education in Ozaukee County, Wisconsin; an 1861 rebellion of Ozaukee County German Americans against Civil War conscription; an 1862 “Indian panic” in Wisconsin; lumber camps and saw mills of Muskegon, Michigan; the 1875-76 Black Hills gold rush and subsequent Sioux Indian War; and school superintendency and law practice in Kewaunee County, Wisconsin.

Robbins, Edward W., *Edward W. Robbins Diaries, 1857-1908* (unpublished).

Access through UWM Library Archives Department.

Catalog description: journals kept by Robbins, a Wauwatosa, Wisconsin, farmer, recording mainly weather and crop conditions, prices received for commodities, and his personal expenses.

Robinson, C. [Resources, Advantages and Productions of the Counties of Brown, Door, Oconto and Shawano, in the State of Wisconsin](#). Green Bay: Robinson & Bro., Printers, 1870.

Online via UWM Libraries

This is not specifically from Milwaukee or Milwaukee County but it mentions the Homestead Act and it is from 1870 and is like something the early settlers would have seen in their home countries and the eastern and southern USA before deciding to immigrate to Wisconsin: these promotional materials were designed to entice both domestic and international migrants to come to Wisconsin and settle there, and would have been distributed around Europe and printed in several European languages as well.

### *Secondary Sources*

Apps, Gerold W. *Wisconsin Agriculture: A History*. Madison: Wisconsin Historical Society Press, 2015.

Access via a UWM Libraries Interlibrary Loan Request

You'll want to focus on Chapters 5 and 6 as they discuss the wheat-dairy switch, as well as the production of hops and barley for brewing, attempts to begin sheep grazing, and the feeding of dairy cows with silage for consistent milk production, which was an innovation not yet adopted in 1870.

Bloomberg, Kristin Mapel. "Women and Rural Social Reform in the 1870s and 1880s: Clara Bewick Colby's *Farmers' Wives*." *Agricultural History* 89, no. 3 (2015): 402-25.

Early Midwestern feminists in the 1870s and 1880s argued for educational and moral reform to improve the lot of the hard-working farmwife and the 20,000 American women at the time who owned their own farms.

Child, Brenda J. *My Grandfather's Knocking Sticks: Ojibwe Family Life and Labor on the Reservation*. Minneapolis: Minnesota Historical Society, 2014.

Child's discussion of wild rice and maple sugar harvesting describes wild rice and maple sugaring as historically a woman's activity and US federal attempts to revive what she calls the "seasonal round" as male labor in the 1920s and 1930s. Child's discussion of the re-gendering of wild rice gathering as male is significant: farming and fathering were women's work to Native tribes and many of the "civilization" attempts that began in the

1870s were an attempt to get Native men to farm and to get Native women to stop farming.

Edwards, Richard. "African Americans and the Southern Homestead Act." *Great Plains Quarterly* 39, no. 2 (2019): 103-129, [doi:10.1353/gpq.2019.0018](https://doi.org/10.1353/gpq.2019.0018).

Online Access through UWM

Discusses how black Americans' exclusion from the post-Civil-War Homestead Act motivated their migration west to the Great Plains. The fact of their exclusion (due to local white opposition) and their subsequent inability to acquire southern farmland could equally apply to black Milwaukee migrants of the same era.

Edwards, Richard. "To Commute or Not Commute, the Homesteader's Dilemma." *Great Plains Quarterly* 38, no. 2 (2018): 129-150, [doi:10.1353/gpq.2018.0021](https://doi.org/10.1353/gpq.2018.0021).

Discusses the Homestead Act and whether "commuting" one's claim—that is, buying the free land outright for someone else to work or manage it—was fraudulent.

Janus, Edward. *Creating Dairyland: How Caring for Cows Saved Our Soil, Created Our Landscape, Brought Prosperity to Our State, and Still Shapes Our Way of Life in Wisconsin*. Madison: Wisconsin Historical Society Press, 2011.

Available through UWM-Waukesha Library and online access

Pages 1-46 explain the switch from wheat to dairy and the "boom and bust" wheat agriculture cycle.

Johnson, Robert H. "The New Populism and the Old: Demands for a New International Economic Order and American Agrarian Protest." *International Organization* 37, no. 1 (1983): 41-72, [www.jstor.org/stable/2706485](http://www.jstor.org/stable/2706485).

Access online through UWM Libraries

Johnson discusses the post-Civil-War imbalance between industrial urban America and rural agrarian America, comparing it to the twentieth-century relationship between the developed countries and the Third World. Despite his comparisons to modern times and his sometimes abstruse language, he provides good historical context on 19<sup>th</sup>-century populism as a political response to agrarian problems.

Key, Scott. "Economics or Education: The Establishment of American Land-Grant Universities." *The Journal of Higher Education* 67, no. 2 (1996): 196-220.

Online Access through UWM Libraries

Argues that the establishment of land-grant universities was primarily for economic reasons and not educational ones.

McMurry, Sally. *Transforming Rural Life: Dairying Families and Agricultural Change, 1820-1885*. Baltimore: Johns Hopkins University Press, 1995.

UW System request

McMurry examines dairy-making's shift from the farm home to the factory in terms that analyze social systems, cultural values, material culture, and family dynamics. McMurry argues that the shift liberated farm women from home dairy production, freed their labor for other tasks, and led to a new emphasis for women on cash crops, the market economy, and wage work.

Miller, Cary. *Ogimaag: Anishinaabeg Leadership, 1760-1845*. Lincoln: University of Nebraska Press, 2010.

UWM Libraries stacks and online

Miller explores how Ojibwe women were the primary agriculturalists, clan leaders, and food sellers of their tribes, from which they derived most of their political power.

Nienkamp, Paul. "Land-Grant Colleges and American Engineers: Redefining Professional and Vocational Engineering Education in the American Midwest, 1862-1917." *American Educational History Journal* 37, no. 2 (2010): 313-330.

Ruggles, Clyde O. "The Economic Basis of the Greenback Movement in Iowa and Wisconsin." *Proceedings of the Mississippi Valley Historical Association* VI (1912-1913): 142-165.

Access for free on Google Books

Farmers who raised grain in Iowa and Wisconsin, navigated the Milwaukee grain trade, and suffered from low grain prices supported the reform agenda of the Greenbackers/Grange movement; more prosperous dairy farmers did not.

Schafer, Joseph. *A History of Agriculture in Wisconsin*, Vol. 2. Madison: Wisconsin Historical Society, 1922.

Access for free on Google Books. Also at UWM Libraries AGS Library, General Stacks and Archives.

You'll want to focus on chapters 5, 6, and 7. Chapters 5 and 6 detail the wheat bust and the switch to diversified agriculture. Experiments with raising wool sheep and hops were

winding down by 1870 due to low prices for hops and wool, but in 1870 pork-raising was growing in popularity and saved many former wheat farmers from bankruptcy and land loss. This was enhanced by a growth in livestock raising more generally, and a hybridization of local livestock with new “improved breeds” from Europe and the eastern states.

## Ezekiel Gillespie

Ezekiel Gillespie was one of nineteenth-century Milwaukee's most famous black residents. As a railroad porter, Gillespie would have been concerned about weather conditions for his work on the railways. As the founder of Milwaukee's first black church (St. Mark's African Methodist Episcopal), he might have been concerned about weather conditions for church services and events affecting his congregation and community. He acquired early prosperity through his business as a grocer. Gillespie, a biracial man from Tennessee who was his enslaver's son, was also Wisconsin's and Milwaukee's first registered black voter. Hatred for slavery among Milwaukeeans, fanned by its notoriously abolitionist Yankee-Yorker elite, had encouraged black migrants to form a small community there by 1870. Gillespie's descendants dispersed throughout the Midwest and to the West Coast, many of them taking up prominent social roles in the black community like he had, while others "passed" for white and chose to live as white persons.

### *Primary Sources*

"Negro Suffrage in Wisconsin": *Daily Milwaukee News*: Sharpstein and Lathrop, November 12, 1865. <http://content.wisconsinhistory.org/cdm/ref/collection/tp/id/49470>

"First Colored Voter." *The Evening Wisconsin*. (12 June 1897). Online facsimile at <http://www.wisconsinhistory.org/turningpoints/search.asp?id=1385>.

### *Secondary Sources*

Castagna, Grace. "Abolition and the Law in Civil-War-Era Wisconsin: From Glover to Gillespie." *Wisconsin Magazine of History* 102 (1) (Autumn 2018): 44-53. <http://content.wisconsinhistory.org/cdm/compoundobject/collection/wmh/id/52938/show/52927/rec/2>

Holzhueter, John O. "Ezekiel Gillespie, Lost and Found." *Wisconsin Magazine of History* 60 (3) (Spring 1977): 179-184, <http://content.wisconsinhistory.org/cdm/compoundobject/collection/wmh/id/34173/show/34083/rec/1>.

Jacobs, Jenna. "African Methodist Episcopalians." *Encyclopedia of Milwaukee*. <https://emke.uwm.edu/entry/african-methodist-episcopalians/>.

Schultz, Jaclyn N. "In Search of Northern Freedom: Black History in Milwaukee and Southern Ontario, 1834-1864." *Wisconsin Magazine of History* 101 (1) (Autumn 2017), 42-53.

Smith, Robert S. "African Americans." *Encyclopedia of Milwaukee*. <https://emke.uwm.edu/entry/african-americans/>

Trotter, Joe William, Jr. *Black Milwaukee: The Making of an Industrial Proletariat, 1915-1945*, 2d ed. Urbana, IL: University of Illinois Press, 2007; originally published 1985.

## **Grain Trader**

### **Chicago Board of Trade or Milwaukee Grain Exchange**

In 1870, Wisconsin was a world supplier of wheat. The Milwaukee Grain Exchange and Milwaukee's shipping on the Great Lakes grew as a result of the wheat boom, as did the Chicago Board of Trade, which began as a grain exchange. Farming reformers of Yankee-Yorker origin, who advocated for dairy farming and other diversified crops instead of wheat, thought that the state was over-reliant on wheat, which they viewed as leading to economic instability, soil exhaustion, and poverty among farm families. Still, wheat remained a major crop and article of grain in the 1870s—in some years the volume and total worth of Milwaukee's grain exports exceeded those of Chicago. The profitability of wheat and other grain often hampered agricultural diversification in Wisconsin and led to a get-rich-quick mentality among novice wheat farmers that contributed to the volatility of wheat prices. Overseas markets, particularly Great Britain and the Europeans ravaged by the Franco-Prussian War, used American grain, including Wisconsin wheat, to avert famine throughout the 1870s.

#### *Primary Sources*

Milwaukee Chamber of Commerce [Annual Report of the Trade and Commerce of Milwaukee.](#)  
Milwaukee: Evening Wisconsin Book and Job Print. House, 1871.

Online access

[Milwaukee Grain Exchange records, 1849-1976.](#)

Access through the UWM archives

I noticed several commercial statistics for 1870: the important thing is that Milwaukee's shipments of grain and flour actually exceeded Chicago's in 1870! Students don't have to read the whole thing but a few chapters will be helpful.

#### *Secondary Sources*

Cronon, William. *Nature's Metropolis: Chicago and the Great West*. New York, W.W. Norton and Company, 1991.

See chapter 3, "Pricing the Future: Grain," 97-142, for a classic overview of the grain industry in the Midwest.

Milwaukee's Grain Exchange. N.p.: n.p., between 1983 and 1999.

Leaflet available at UW-Milwaukee Libraries Special Collections Department, Call Number: F589.M68 M554x 1983.

Rothstein, Morton. "American Wheat and the British Market, 1860-1905." Ph.D. diss., Cornell University, 1960.

Online Access through UWM Libraries, see especially chapters 2, 3, 5, and 6

Rothstein emphasizes the role of railroads and water transport in making Milwaukee, Chicago, and other Midwestern cities hubs of the wheat trade in the USA; the invention of the grain elevator; the exportation of wheat from the Great Lakes region to New York to be shipped abroad via the Erie Canal; Chicago Board of Trade's beginning as an association of grain merchants, etc.; and the development of "futures" trading in the Great Lakes trade, facilitated by the use of grain elevators and their receipts. The early part of Chapter Five focuses on the English grain trade: England was importing about half (48 percent) of the wheat needed for its consumption by the 1870s, and most of that was supplied by the U.S.A., which played a primary role in the Wisconsin "wheat bust" and the switch to dairy; England took a half to two-thirds of all American wheat exports from 1870-1914; the dependence of all of 19<sup>th</sup>-century Europe on American grain imports due to bad harvests in Europe from 1879-1881. Chapter 6 especially concentrates on the development of Midwestern wheat-growing. Illinois grain merchants and the Granger movement.

*History of the Board of Trade of the City of Chicago*, Vol. 1. Taylor, Charles Henry. Chicago: R.O. Law, 1917,  
<https://babel.hathitrust.org/cgi/pt?id=iau.31858050088826&view=1up&seq=353>.

Read for free online through HathiTrust, though not available for download.

Students will want to read chapter 6 (VI), which covers the years 1866-1871. It begins on page 339 in the book, which is listed also as 353 in the digital scan.

## Great Lakes Captain, Deckhand, and/or Widow

After the Civil War, there was a vast increase in the volume of Great Lakes shipping, the number of sailing vessels on the Lakes at any given time, and technological innovations in the design of Great Lakes ships. This increased the frequency, intensity, and financial and human losses from Great Lakes shipwrecks. Sailors of all races noted that November was the worst month for storms and shipwrecks and called it the “curse of the 11<sup>th</sup> month.” But the captains and financiers of ships ignored this “curse,” either out of overconfidence or for financial reasons. What motivated the weather service to form was a particularly bad storm in November of 1869, which led to record loss of cargoes and men and scenes of devastation all around the Lakes. Captains had a mixed reaction to the weather service: many of them supported the weather service and followed its warnings, and many did not, preferring to trust omens, signs, folklore and their own intuition. This character could be a ship’s captain, a deckhand, or a widow of a deckhand or captain from the ‘69 storm, either for or against the Signal Service.

### *Primary Sources*

Curwood, James Oliver. *The Great Lakes, the Vessels That Plough Them: Their Owners, Their Sailors and their Cargoes; Together With a Brief History of Our Inland Seas*. New York and London: G.P. Putnam’s Sons, the Knickerbocker Press, 1909.

Free e-book on Google Books.

This book is a bit past 1870, but is notable for its tone of pro-industrial, pro-“progress” writing, but contains some useful information, particularly biographies of several notable ship’s captains.

Haydamacker, Nelson “Mickey,” and Allan Millar. *Deckhand: Life on Freighters of the Great Lakes*. Ann Arbor: University of Michigan Press, 2009.

Access through UWM Libraries stacks.

A more modern take on an individual deckhand’s career, beginning in the 1950s.

Mansfield, John Brandt. *History of the Great Lakes*, vol. 1. Chicago: J.H. Beers and Company, 1899.

Free e-book on Google Books

Great resource on the storm of November 1869 that inspired the Weather Service. Flip to around the 700s to get to that part.

Schmidt, Gary W., and Warren Gerds. *Real Honest Sailing: With a Great Lakes Captain*. Green Bay, WI: Seaway Printing Company, 2013.

## Secondary Sources

Clary, James. *Ladies of the Lakes*. Lansing, MI: Thunder Bay Press, 1994.

At UWM stacks.

Pictures and history of notable Great Lakes ships.

Clary, James. *Ladies of the Lakes II*. West Bloomfield, Michigan. A&M Publishing, 1992.

Wisconsin Historical Society collection

Good source of lore and art: also explains that many captains did not use the weather service after it was implemented, which would have prevented many of the subsequent shipwrecks.

Craft, Erik Daniel. "The Provision and Value of Weather Information Services in the United States during the Founding Period of the Weather Bureau with Special Reference to Transportation on the Great Lakes." Ph.D. diss., University of Chicago, 1995.

Access through the UWM Libraries,

<https://ezproxy.lib.uwm.edu/login?url=https://search-proquest-com.ezproxy.lib.uwm.edu/docview/304252436?accountid=15078>.

Jensen, John Odin. *Stories from the Wreckage: A Great Lakes Maritime History Inspired by Shipwrecks*. Madison, WI: Wisconsin Historical Society Press, 2019.

Access through UW System borrowing at UWM Libraries. Available at UW-Madison, UW La Crosse, and UW Platteville

A fairly comprehensive and new history centered around Wisconsin shipwrecks from the early 1800s to around 1919. Identifies important ship-building families, including their biographies and origins, while arguing that Wisconsin was a "maritime frontier" that linked the Great Lakes with Atlantic sea trade.

Thompson, Mark L. *Graveyard of the Lakes*. Detroit: Wayne State University Press, 2000.

Available at UWM and online access.

History of Great Lakes shipwrecks beginning in 1679. Chapter 7 would be most useful to the course, as it discusses November storms and their history, including the one in 1869.

Thompson, Mark L. *Queen of the Lakes*. Detroit: Wayne State University Press, 1994.

Access through UWM Libraries stacks.

History of notable Great Lakes Ships.

Thompson, Mark L. *Steamboats and Sailors of the Great Lakes*. Detroit: Wayne State University Press, 1991.

Access through UWM Libraries

A good general history, a bit technical in describing types of ships and their construction.

### *Other resources*

Milwaukee Public Library's Great Lakes Marine Collection:

This collection prominently features records of vessels that sailed the Great Lakes, plus magazines, journals and directories pertaining to Great Lakes ships, subject files on Great Lakes maritime history, nautical charts, log books, and historical photos of Milwaukee waterways.

See details at [https://mpl.org/special\\_collections/great\\_lakes\\_marine\\_collection.php](https://mpl.org/special_collections/great_lakes_marine_collection.php).

Wisconsin Maritime Museum in Manitowoc:

Over 85,000 artifacts, photographs, works of art and documents pertaining to Wisconsin and Great Lakes maritime history from the earliest historical times to the present. This collection is also an "official repository" for Great Lakes shipwreck artifacts.

See details at <https://www.wisconsinmaritime.org/>.

## Byron Kilbourn

Another controversial figure who contributed much to Milwaukee's development, particularly its canals, roads, harbor and railroads, Kilbourn was noted for his bombastic and often difficult personality, but was a close personal friend of Increase Lapham, whose career grew in tandem with his own. Born in Connecticut as another westering Yankee-Yorker, he began his career as a canal man, surveyor, and land speculator in Ohio before settling in Milwaukee. He was a key force behind the funding and construction of Milwaukee's transportation. He was the founder of Kilbourn City (renamed Wisconsin Dells in the 1930s), and Milwaukee's Kilbourntown neighborhood.

### *Primary Sources*

*Journal of the House of Representatives, Extra Session of the Second Legislative Assembly of Wisconsin, Begun and Held at Madison, on Monday, the Third Day of August, in the year of our Lord one thousand eight hundred and forty.* Madison: 1841, 39-46.

Available through Google books at

[https://books.google.com/books?id=14TOAAAAMAAJ&newbks=1&newbks\\_redir=0&source=gbs\\_navlinks\\_s](https://books.google.com/books?id=14TOAAAAMAAJ&newbks=1&newbks_redir=0&source=gbs_navlinks_s)

Kilbourn's speech on a construction loan for the Milwaukee and Rock River canal.

Kilbourne, Payne Kenyon. *The History and Antiquities of the Name and Family of Kilbourn (in Its Varied Orthographies)*. New Haven, CT: Durrie & Peck, 1856.

Available through Google Books at

[https://books.google.com/books?id=ERhYAAAACAAJ&newbks=1&newbks\\_redir=0&dq=%22Byron+Kilbourn%22&source=gbs\\_navlinks\\_s](https://books.google.com/books?id=ERhYAAAACAAJ&newbks=1&newbks_redir=0&dq=%22Byron+Kilbourn%22&source=gbs_navlinks_s)

A biographical sketch of Byron by a laudatory relative, written while Byron was still living. See pages 238-246.

Tenney, H.A., and David Atwood. *Memorial Record of the Fathers of Wisconsin, Containing Sketches of the Lives and Career of the Members of the Constitutional Convention of 1846 and 1847-8, with a History of Early Settlement in Wisconsin*. Madison, WI: David Atwood, 1880.

Available through Google Books at

[https://books.google.com/books?id=ryYuAAAAYAAJ&newbks=1&newbks\\_redir=0&source=gbs\\_navlinks\\_s](https://books.google.com/books?id=ryYuAAAAYAAJ&newbks=1&newbks_redir=0&source=gbs_navlinks_s)

See pp. 230-232.

Kilbourn, Byron. Miscellany, 1825-1852, 1862.

Held by UW Madison. Consult with UWM Archives Department about how to access these materials.

Summary description from catalog: Miscellaneous items of Kilbourn including a history of La Crosse, Wis. land grants; a legal document in manuscript, prepared in 1860; letters, 1835-1837, to Micajah T. Williams concerning sale of lots, settlement of Milwaukee, and federal government activity; letters, 1825-1852, to his sister in Ohio concerning business and family matters; and an 1862 letter to William Henry Wright requesting abstracts.

Walter Phelps letter, 1908.

Access through UWM archives.

Letter from Phelps to his brother in Horicon, Wisconsin telling how he brought the first locomotives to Wisconsin for Byron Kilbourn, president of the Milwaukee and Mississippi Railroad.

*Once a Year.*

Available at Google books and in the UWM Archive.

[https://books.google.com/books?id=GCBX5bkrGAC&newbks=1&newbks\\_redir=0&vq=%22Byron+Kilbourn%22&dq=%22Byron+Kilbourn%22&source=gbs\\_navlinks\\_s](https://books.google.com/books?id=GCBX5bkrGAC&newbks=1&newbks_redir=0&vq=%22Byron+Kilbourn%22&dq=%22Byron+Kilbourn%22&source=gbs_navlinks_s)

A periodical beginning in 1896 and published by the Milwaukee Press Club. An author on page 9, presumably in the 1890s-1900s, describes why he didn't support Kilbourn's political views.

*Secondary Sources*

Berquist, Goodwin, and Paul C. Bowers, Jr. *Byron Kilbourn and the Development of Milwaukee*. Milwaukee: Milwaukee County Historical Society, 2001.

Access through UWM Libraries

Jablonsky, Thomas J. "Byron Kilbourn." *Encyclopedia of Milwaukee*.

<https://emke.uwm.edu/entry/byron-kilbourn/>.

*This is Kilbourntown*. Milwaukee: Time Holdings, 1971.

Access through UWM Archives

## Alexander Mitchell

A native of Scotland, a lawyer and a businessman, Mitchell established Milwaukee's first reliable bank when he settled there, along with a cadre of other Scots, and evidently showed "good Scotch sense" in marrying another prominent Milwaukee family's daughter, who was of Vermont Yankee stock. Mitchell also played a role in bringing railways to Milwaukee, ran for Congress in 1870, serving in Congress for a number of years, and preached against banks who used paper money, which he disliked. Mitchell seems to have provoked extreme positive or negative reactions: fans saw him as a civic father to Milwaukee who contributed to its development, while detractors saw him as a self-interested businessman who was little better than a crook. Mitchell also seems to have brought his siblings and other relatives to Milwaukee from Scotland in a chain migration and gotten them jobs or postings: an early "Godfather" of the city? No negative press appears to have attached itself to these Scottish immigrants, aside from the personal attacks on Mitchell; commentators rather laud the stereotypical Scottish traits in Mitchell they do mention: Scots were well-educated, English-speaking Protestants who were canny with money and business, but also had a reputation (evident in the smears on Mitchell) for being tight-fisted, stingy, greedy, selfish, grasping and clannish.

### *Primary Sources*

Butler, James D. "Alexander Mitchell, the Financier." *Wisconsin Historical Collections*, Volume XI (1888).

Access online at <http://cdm15932.contentdm.oclc.org/cdm/ref/collection/whc/id/5463>

Discusses Mitchell's emigration from Scotland and his early innovations in Wisconsin banking. See pp. 435-450.

[Alexander Mitchell: Reception and Banquet: Proceedings and Speeches at the Reception and Banquet in Honor of Alexander Mitchell on His Return to Milwaukee from a Visit to Scotland, October 26th, 1883; with a Biographical Preface.](#) Milwaukee Chamber of Commerce. Milwaukee: Cramer, Aikens, & Cramer, Printers, 1884.

Available at UWM archives and for free online through Google Books

A pamphlet of about forty pages with a good biographical preface; also gives a good account of how Mitchell brought his extended Scottish family to Milwaukee and gave them important positions, and how late nineteenth-century American businessmen saw themselves as active participants in an imperial endeavor, the building of the USA as a settler-colonial empire.

Mitchell Family Papers, 1847-1923.

Available at UWM Archives: UWM Manuscript Collection 75.

Whitman, C.M. *American Orators and Oratory: Comprising Biographical Sketches of the Representative Men of America, together with Gems of Eloquence upon Leading Questions That Have Occupied Public Attention from the Foundation of the Republic to the Present Time*. Chicago, IL: JS Goodman and Company, 1884.

Online at Google Books for free, and also at UW-Madison in print

An 1874 speech by Alexander Mitchell called “Banking and Currency,” against “free banking” and paper money, and in support of a gold and silver standard. See pp. 514-521.

Mitchell, Alexander. *Communication of Alexander Mitchell, Relating to the Charter of the Wisconsin Marine and Fire Insurance Company*. Wisconsin Marine and Fire Insurance Company, Madison: 1843.

Available at Madison. Mitchell’s letter is also available online in the Council of the Wisconsin Legislative Assembly, *Journal of the Council of the Legislative Assembly of Wisconsin*. Platteville: Alonzo Platt, 1842, page 542.

[https://books.google.com/books?id=ULJLAQAAMAAJ&newbks=1&newbks\\_redir=0&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](https://books.google.com/books?id=ULJLAQAAMAAJ&newbks=1&newbks_redir=0&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)

A short letter relating to the legitimacy of his company

“A Merited Compliment.” *Milwaukee Daily Sentinel*, 13 Oct. 1870.

Available through Nineteenth Century U.S. Newspapers,  
<https://link.gale.com/apps/doc/GT3009115635/NCNP?u=milwaukee&sid=NCNP&xid=d7d98fc2>.

Anti-Mitchell

“City Matters.” *Milwaukee Daily Sentinel*, 8 Nov. 1870.

Available through Nineteenth Century U.S. Newspapers,  
<https://link.gale.com/apps/doc/GT3009709544/NCNP?u=milwaukee&sid=NCNP&xid=f8b6f43b>

Anti-Mitchell

“If we want a legal quibble unravelled, Judge Lyon is the man; but If we want a man of large business experience and correct views relating to finance and taxation, Alexander Mitchell is the man to elect.” *Milwaukee Daily Sentinel*, 13 Oct. 1870.

Nineteenth Century U.S. Newspapers,  
<https://link.gale.com/apps/doc/GT3009115630/NCNP?u=milwaukee&sid=NCNP&xid=bf752fd>.

Anti-Mitchell

“THE voters of this Congressional district will do well to remember that it is not altogether a question of merit between Judge Lyon and Mr. Mitchell, that they are called upon to decide at the ballot-box, although that ought to influence then in Lyon’s favor, but that the administration of President Grant is involved in the contest, and a decision against Colonel Lyon must be regarded also as a verdict against General Grant.” *Milwaukee Daily Sentinel*, 17 Oct. 1870.

Nineteenth Century U.S. Newspapers,  
<https://link.gale.com/apps/doc/GT3009115809/NCNP?u=milwaukee&sid=NCNP&xid=ba6a5f7>.

Anti-Mitchell

There was a sidewheel excursion boat at the Dells (Kilbourn City) constructed and named the Alexander Mitchell in 1870. Links to photographs of the ship are here:

<https://search.library.wisc.edu/digital/AOG6XUUGJYY5CP8T>  
<https://search.library.wisc.edu/digital/AIOJRRWT4O4FHG9B>  
<https://search.library.wisc.edu/digital/AILOVMXAD6YV2F8Q>

### *Secondary Sources*

Buford, Charles H. *Alexander Mitchell (1817-1887): Banker, Industrialist, Builder of Railroads, Pioneer of the Great West!* New York: Newcomen Society in North America: 1950.

Access in UWM archives

Harding, Bethany “Alexander Mitchell.” *Encyclopedia of Milwaukee*.  
<https://emke.uwm.edu/entry/alexander-mitchell/>

## Albert Myer

Myer was the head of the US Army Signal Corps, present at the first forecast. Myer was also a Yankee-Yorker, born in Newburgh, New York and raised in Buffalo. He received his MD degree from Buffalo Medical College in 1851 and became a US Army surgeon in 1854. He invented a system of long-distance telegraphic codes known as wig-wag signaling, used by both sides in the Civil War. He also served in the Navajo campaign in New Mexico. Myer became the chief signal officer of the new Signal Corps in March 1863. He was removed from that post in November 1863 due to professional rivalry and personal animus with Secretary of War Edwin M. Stanton. In 1866, Myer was reinstated and the Signal Corps reorganized. In 1868 he attained the rank of brigadier general, and in 1870, the US Congress officially assigned Myer and the Signal Corps the duty of making "meteorological observations" by telegraph. In November 1870, Myer had been the official head of the Signal Corps since August of 1867.

### *Primary Sources*

Sands, B.F. *Reports on Observation of the Total Eclipse of the Sun, August 7, 1869*. Washington D.C.: Government Printing Office, 1870.

Free on Google Books

Great account of the eclipse and gives an example of Myer's scientific, precise, yet flowery writing style. See pp. 191-96.

*The War of the Rebellion: A Compilation of the Official Records of the Union and Confederacy*. Washington D.C., U.S. Government Printing Office, 1889.

Free Google E-Book

Myer's Civil War dispatches. See pp. 219-220.

United States Congressional Serial Set, Volume 4045. Washington DC: U.S. GPO, 1901.

Government documents for the Signal Service mentioning Myer start on page 609. Students can read from 609-614 if they want an account of the service up to 1870, but can read further if they wish for later developments.

Conover, Frederick K. *Wisconsin Reports: Cases Determined in the Supreme Court of Wisconsin*, Vol. 55. Chicago: Callaghan, 1883.

This case is a mortgage-fraud dispute between Albert and Henry Myer, both deceased when the case was settled posthumously by Albert's widow, Catherine Walden Myer, who was the daughter of a prominent Buffalo attorney. Both Myer men were acquitted in the case, largely upon their reputation as "honorable" people. See pp. 85-89.

Myer, Col. Albert J. Excerpts from "A Manual of Signals: for the Use of Signal Officers in the Field." Washington DC, 1864. Signal Corps Association history web site.  
<http://www.civilwarsignals.org/pdf/lgmanualofsignals.pdf>.

### *Secondary Sources*

Gilbert, Bob. "Albert James Myer's Contributions to Meteorology." Signal Corps Association website, <http://www.civilwarsignals.org/1st/myer/weather/myerpostwar.html>.

Gilbert, Bob. "Old Probabilities: Albert Myer and the US Weather Bureau." *Western New York Heritage* magazine (Winter 2010): p. 9-16, Signal Corps Association website.  
<http://www.civilwarsignals.org/1st/myer/weather/wnyheritagewinter2010.pdf>.

Raines, Rebecca R. *Getting the Message Through: A Branch History of the US Army Signal Corps*. Washington D.C.: U.S. Department of Defense, 1996.

Free e-book on Google Books. Also online access through UWM and physical copy at AGS Library

Chapters 1 and 2 discuss Myer.

## Native American

The tribes anciently indigenous to Milwaukee are the Three Fires Confederacy (Ojibwe, Odawa/Ottawa, and Potawatomi, collectively called the *Anishinaabeg*), as well as the Menominee and some Ho-Chunk. Milwaukee was said to be a kind of dividing point between Potawatomi and Menominee lands. In Milwaukee there are also the relocated eastern tribes such as the Stockbridge-Munsee, Brothertown, and Oneida, who, like the Yankee-Yorkers, hail from the east coast. By 1870, many of them have already been subjected to “removal”, a US government policy which either brought them to Milwaukee (in the case of the eastern tribes) or forced them out until they returned later under President Andrew Jackson’s policies of the 1830s, in which tribes east of the Mississippi were moved west on forced, brutal journeys. In 1838, Milwaukee area Indians experienced their own “Trail of Death” when US soldiers forced them to gather at the “Indian Fields” near the present-day Forest Home Cemetery and marched them to Kansas and Iowa. Many returned or evaded the order to move. Native Americans have their own traditions about the weather, the Great Lakes, and storms, many of which revolve around the reasons for the storms and the presence of monsters (water panthers or serpents) in the lakes.

### *Primary Sources*

Archiquette, John. *Diary, 1868-1874* (unpublished).

Online access here: <http://digicoll.library.wisc.edu/cgi-bin/WI/WI-idx?id=WI.Archiquette2i>

Diary of an Oneida Indian man and his life on the Oneida reservation near Green Bay

Kawbawgam, Charles, et al. *Ojibwa Narratives of Charles and Charlotte Kawbawgam and Jacques LePique, 1893-1895*. Detroit: Wayne State University Press, 1994.

Access in UWM Libraries stacks.

Mentions some of the lore about Mishibizhiw (the great water panther) and the Great Water Snakes.

### *Secondary Sources*

Bandow, James B. “White Dogs, Black Bears, and Ghost Gamblers: Two Late Woodland Midewiwin Aspects from Ontario.” In *Papers of the Fortieth Algonquian Conference*, edited by Karl S. Hele and J. Randolph Valentine. SUNY Press, 2012.

Talks about the association between the Lakes, the water monsters, and the presence of copper. Rand Valentine is an expert on the Ojibwe language and mythology.

Bowes, John P. *Land Too Good for Indians: Northern Indian Removal*. Norman, OK: University of Oklahoma Press, 2016.

Request through Interlibrary Loan

Bowes chronicles the removal, and return, of Indians from communities such as the Potawatomi of Illinois and Indiana, and how many Potawatomi, Odawa and Ojibwe people in Wisconsin and Michigan avoided or evaded removal and relocation in this era.

Corbiere, Alan, and Crystal Migwans, "Animikii miinwaa Mishibizhiw: Narrative Images of the Thunderbird and the Underwater Panther." In *Before and After the Horizon: Anishinaabe Artists of the Great Lakes*. Edited by David W. Penney and Gerald McMaster, Washington D.C.: Smithsonian Institution, 2013, 37-49.

Available through UW System Libraries, Google Books.

Discusses the role of the water panther in mythology and art.

Edmunds, Russell David. *The Potawatomis, Keepers of the Fire*. Norman: University of Oklahoma Press, 1978.

UWM Libraries stacks.

Talks about how some Potawatomi were removed and some were permitted to stay, particularly Catholic converts and those of mixed ancestry.

Edmunds, Russell David. *Enduring Nations: Native Americans in the Midwest*. Urbana, IL: University of Illinois Press, 2008.

Request through Interlibrary Loan

Reilly, F. Kent and James F. Garber, eds. *Ancient Objects and Sacred Realms: Interpretations of Mississippian Iconography*. Austin, TX: University of Texas Press, 2007.

UWM Stacks and online access

Contains a fairly extensive discussion of Native lore around Great Lakes water monsters and other spirits, which it refers to by various names, translated as "water panthers." Most notably: "such panthers maliciously drown people, who are afterwards found with mud in their mouths, eyes and ears. One of these lived at Mana'wa, now Milwaukee, and sucked people in." Pay particular attention to Chapter 5 (pp. 107-135), "The Great Serpent in Eastern North America."

Sleeper-Smith, Susan. *Indian Women and French Men: Rethinking Cultural Encounter in the Western Great Lakes*. Amherst: University of Massachusetts Press, 2001.

Chapter 6, "Being Indian and Becoming Catholic," discusses how Catholic Indians, mainly of mixed European and indigenous ancestry, were permitted to remain in Milwaukee and Chicago and were not subjected to removal orders.

Tanner, Helen Hornbeck, and Miklos Pinther. *Atlas of Great Lakes Indian History*. Norman, OK: Published for the Newberry Library by University of Oklahoma Press, 1987.

Online access through library website: hard copy available at UWM's American Geographical Society Library.

Wilson, Gilbert Livingstone and Buffalo Bird Woman (Wahheenee). *Buffalo Bird Woman's Garden: Agriculture of the Hidatsa Indians*. St. Paul: Minnesota Historical Society, 1987.

Available through UWM System request

This is a reprint of the 1917 edition. Buffalo Bird Woman was born around 1839 in present-day North Dakota and, by the time she recounted her stories to Wilson, had been displaced with the rest of her people onto the Fort Berthold reservation. But she maintained her customary agricultural practices, which she recounts here. She lived to be nearly 100 years of age. The Hidatsa are a Great Plains tribe, so their farming methods would not have been exactly alike to the Great Lakes people, but like other Hidatsa and Native women across the Midwest, Buffalo Bird Woman took pride in her farming duties.

## Civil War Veteran at Soldier's Home

In 1870 the Soldier's Home would have been newly established, since it was founded in 1867. Prominent families like the Laphams contributed to its establishment. Many Civil War veterans would have been living there, maybe one who looks forward to the forecast because of his weather-related aches and pains. Soldiers at the home were sold beer, and many came home from the war with addictive habits like morphine. In the 1870s a chapel was built on the grounds of the Home.

### *Primary Sources*

There are nineteen pictures of the Soldier's Home from the early 1900s in the "Greetings from Milwaukee" online postcard image collection: <https://uwm.edu/lib-collections/greetings-from-milwaukee/>

"Concerning Women." *Women's Journal*, 1898.

Access online, <https://go-gale-com.ezproxy.lib.uwm.edu/ps/i.do?p=NCCO&u=milwaukee&id=GALE|PNVPOA317165075&v=2.1&it=r&sid=NCCO&asid=c452ed32>

Mentions a Mrs. Lydia Ely as a major fundraiser for the Soldier's Home in 1865 and a more recent (1890s) Civil War monument in the city.

Corbett, Richard W., and National Home for Disabled Volunteer Soldiers. Northwestern Branch. *The Soldiers' Home: Detailed Description of the North-Western Branch, National Military Home for Disabled Volunteer Soldiers, Milwaukee County, Wisconsin*. Tenth ed. Milwaukee: [Soldiers' Home], 1898.

Access in UWM Libraries, Special Collections

Stearns, Lutie E., and Beryl E. Whitney. "My Seventy-Five Years, Part 1, 1866-1914." *The Wisconsin Magazine of History*, Vol. 42, No. 3 (Spring, 1959): 211-218.

Available through UWM libraries online.

Lutie Eugenia Stearns, a "Yankee-Yorker" to her marrow, born in Massachusetts of English-Puritan ancestry, became a pioneering Wisconsin librarian whose traveling book service was the precursor to the widespread establishment of public libraries throughout the state, which she advocated for. She tells of her family's move from Massachusetts to Milwaukee in the 1870s. Her father worked for the Soldiers' Home and she recounts a childhood near the Soldiers' Home that was equal parts pleasant and harrowing.

“The Consistency of Our Government Officials Is Shown in the Fact That Men Are Expelled from the Soldier’s Home near Milwaukee Who Get Drunk, Yet \$30,000 of Beer Is Allowed to Be Sold Annually to the Inmates of the Home.” *Woman’s Voice and Public School Champion*, 1891.

Online access (scroll down), <https://go-gale-com.ezproxy.lib.uwm.edu/ps/i.do?p=NCCO&u=milwaukee&id=GALE|GVUPJW784387295&v=2.1&it=r&sid=NCCO&asid=85144bca>

See next item for annotation.

“Milwaukee Soldiers’ Home.” *Woman’s Voice and Public School Champion*, 1893.

Online access, <https://go-gale-com.ezproxy.lib.uwm.edu/ps/i.do?p=NCCO&u=milwaukee&id=GALE|SSZ AHL548346273&v=2.1&it=r&sid=NCCO&asid=7207145d>

This newspaper was run by Boston feminists who were active in the temperance movement and the public school movement, and who also show significant anti-Catholic bias. These two articles from the 1890s allege that the Milwaukee Soldiers’ Home is being run by drunkards, Catholics, and foreigners (whom they conflate).

### *Secondary Sources*

Lynch, Patricia A. *Milwaukee’s Soldiers Home*. Charleston, South Carolina: Arcadia Publishing, 2013.

UWM Libraries stacks and archives

Marten, James. “Veterans.” *Encyclopedia of Milwaukee*.  
<https://emke.uwm.edu/entry/veterans/>

Miljat, Leslie E. *Admission Applications, 1867-1872, National Home for Disabled Volunteer Soldiers, Northwestern Branch, Milwaukee, Wisconsin*. Wauwatosa, Wis.: L.E. Miljat, 1991.

UWM Libraries Archives Department

These items could be used to build a profile of the character.

Ryan, Sean. “Soldiers Home Chapel in Milwaukee Full of Mysteries.” *The Daily Reporter* (Milwaukee, Wis.), 2006.

Rothe, John. "To Care for Him Who Shall Have Borne the Battle': The Milwaukee Soldiers Home at 150." *Wisconsin Magazine of History* 101 (2) (2017): 44-53.

A concise history of the Soldiers' Home; for our purposes students should look at the 1860s-1870s, its first decade.

V.A. Medical Center. *Then "Old Soldier's Home," Now Clement J. Zablocki Veterans Administration Medical Center: Dozen Decades of Dedication, 1867-1987: Milwaukee in Service of the Veteran*. Milwaukee, Wis.: Center, 1987.

Access through UWM Library archives

Save the Soldiers Home, <https://www.savethesoldiershome.com/learn>

A link from the successful project to save the soldiers' home and use it for modern, revamped veteran housing.

## Telegrapher

The success of the weather forecasting system depended on telegraphers, who delivered information about weather conditions and sent out the forecasts. This character will touch on state of science and technology in the nineteenth century, the urbanization of America, and the development of the urban workforce. Post-Civil-War growth in American population and immigration also heralded mass urbanization, industrialization and the rise of major cities. The telegraph and the telephone were invented in this period and brought about an era of mass communication. The ease of communication by telegraph and the cosmopolitan origins of its engineers spurred hopes that telegraphy would create a more peaceful world. Telegraphy has been called the “Victorian Internet” by one historian: the comparison is apt, as many fiber-optic routes for Internet access were built on or near the sites of former telegraph cables.

### *Secondary Sources*

Briggs, Charles Frederick, and Augustus Maverick. *The Story of the Telegraph, and a History of the Great Atlantic Cable: A Complete Record of the Inception, Progress, and Final Success of That Undertaking: A General History of Land and Oceanic Telegraphs: Descriptions of Telegraphic Apparatus, and Biographical Sketches of the Principal Persons Connected with the Great Work*. New York: Rudd & Carleton, 1858.

Online access through the UWM Libraries

Hochfelder, David. *The Telegraph in America*. Baltimore: Johns Hopkins University Press, 2012.

Online access through the UWM Libraries

Müller, Simone. *Wiring the World: The Social and Cultural Creation of Global Telegraph Networks*. New York: Columbia University Press, 2016.

UWM online access

Paulson, Michael. “Telecommunications.” *Encyclopedia of Milwaukee*.  
<https://emke.uwm.edu/entry/telecommunications/>

Schwartz, M., and D. Hochfelder. “Two Controversies in the Early History of the Telegraph.” *IEEE Communications Magazine* 48 (2) (February 2010): 28-32, doi: 10.1109/MCOM.2010.5402659.

Online access

Dispute about how the telegraph was invented and why.

Schwoch, James. *Wired into Nature: The Telegraph and the North American Frontier*. Champaign-Urbana: University of Illinois Press, 2018.

An examination of the transcontinental telegraph's impact on American government and business.

Sussman, Gerald. "Nineteenth-Century Telegraphy: Wiring the Emerging Urban Corporate Economy." *Media History* 22, no. 1 (2016): 40-66.

UWM Libraries online access

Sussman examines the role of the telegraph in 19<sup>th</sup>-century American urbanization, business and development.

Wenzlhuemer, Roland. *Connecting the Nineteenth-Century World: The Telegraph and Globalization*. Cambridge; New York: Cambridge University Press, 2012.

Request through UWM Libraries Inter-Library Loan service

## Weather Prophet

Amidst the growing professionalization and specialization of science, the rise of the university, and the growth of a college-educated class of scientists who did full-time scientific work in the post-Civil-War years, “weather prophets” stood on the losing side of all these trends. Amateur weather prophets, who were not educated as professional scientists and who relied on symbolism and folklore to make weather predictions, often resented the professionalization of weather forecasting as a loss to their business and prestige. Many of them made quite a good living at weather forecasts and resented the scientific incursion as a loss of income. Some of them also did astrological forecasts and combined astrology with the weather, though the astrology was never as reputable in polite circles as the weather predictions, and astrological predictions were often published by weather prophets under aliases.

### *Secondary Sources*

Anderson, Katharine. “The Weather Prophets: Science and Reputation in Victorian Meteorology.” *History of Science*, 37 (2) (June 1999): 179-216.

This article focuses on English weather prophets but might be useful.

Anderson, Katharine. “Looking at the Sky: The Visual Context of Victorian Meteorology.” *The British Journal for the History of Science* 36, no. 3 (2003): 301-32.  
[www.jstor.org/stable/4028157](http://www.jstor.org/stable/4028157).

Also more of an English focus, for comparative purposes.

Anderson, Katharine. *Predicting the Weather: Victorians and the Science of Meteorology*. Chicago: University of Chicago, 2010.

Anderson’s primary focus is on English meteorology and its history, but she has useful information on the history of weather prophets, including some in the USA.

*Picturing Meteorology: Images of Science and History* website,  
<https://picturingmeteorology.com/>

Pictorial articles on meteorological history and its development.

Pietruska, Jamie L. *Looking Forward: Prediction and Uncertainty in Modern America*. Chicago: University of Chicago Press, 2017.

Available through UWM Libraries stacks.

Pietruska, Jamie L. 2018. "A Tornado Is Coming!": Counterfeiting and Commercializing Weather Forecasts from the Gilded Age to the New Era." *Journal of American History* 105 (3): 538-562.