

J. P. Finley: The First Severe Storms Forecaster¹

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first of a two-part series

Abstract

During the 19th century, while others were debating about the theory and morphology of tornadoes, Finley set out to prove that tornadoes, like other weather phenomena, could be forecast. He developed forecast rules and made experimental forecasts. His forecasting and analysis activities made him the center of controversy during most of his professional life and led to open debate in the literature, but he set precedents in meteorological forecasting that are still valid today. His career as a meteorologist started while he was a private in the U.S. Army. His interest continued even when he had achieved the rank of captain and was civil governor of Zamboanga in the Philippines. After his retirement as a colonel he again became active as a private meteorologist, first establishing a business that provided insurance underwriters with meteorological data for assessing risks, and then opening a school of theoretical and applied meteorology and climatology.

Finley as a military meteorologist

John Park Finley was born at Ann Arbor, Michigan on 11 April 1854, the son of Florus Samuel Finley, a prominent and rather well-to-do farmer of Ypsilanti, Michigan. Finley received his primary education in the Ypsilanti school system and completed the course in classical education at the State Normal College (now Eastern Michigan State) in 1869. He entered Michigan State Agricultural and Mechanical College (now Michigan State University) in 1870 and graduated with a Bachelor of Science degree in 1873. In 1882 he received a Master of Science degree from Michigan A & M in recognition of his proficiency in the science of meteorology. His educational credits also include a one-year course in the law department at the University of Michigan during the academic year 1874–1875. After completing his schooling, Finley returned briefly to the family farm, but early in 1877 he enlisted in the U.S. Army Signal Service (later called the Signal Corps).

When Finley enlisted, he was large in stature, standing six feet three inches and weighing close to 200 pounds, a weight that would increase beyond control later in his military career. Subsequent army medical examinations would constantly report him in excellent physical condition and a man with “no bad habits.” He was sent to the Signal Service school at Ft. Whipple, Virginia (Ft. Whipple was renamed Ft. Meyer in 1880 after the death of Gen. Albert J. Meyer, chief signal officer and first head of the Signal Corps weather service.) Finley’s training for assistant to the non-commissioned of-



LIEUTENANT JOHN P. FINLEY, SIGNAL CORPS, UNITED STATES ARMY.

ficer in charge of a weather station began on 26 April 1877. The instruction consisted of courses in military tactics, signaling, telegraphy, telegraphic-line construction, electricity, meteorology, and practical work in meteorological observation. After Finley completed his army schooling, he was detailed as assistant to the sergeant in charge of the Signal Service station in Philadelphia, Pennsylvania, where his interest in tornadoes began. He wrote that he started “a systematic study of the storms of the United States, especially those of a violent character, namely, tornadoes.” In 1878 he prepared his first paper on the subject, which was submitted to the chief signal officer (Finley Papers, 1883).

This paper was never published, and what first whetted Finley’s interest in tornadoes may never be known. Whether the occurrence of tornadoes in the vicinity of Philadelphia during the summer of 1877 sparked his interest, or whether it was a prior deep-seated fascination for this particular weather phenomenon, is a matter of pure speculation. This first effort by Finley to publish was referred to by Cleveland Abbe, chief scientist for the Signal Corps, some years later before a Congressional committee. Abbe testified, in reference to Finley’s tornado work,

¹ An unabridged version of this paper appears in NOAA Technical Memorandum ERL NSSL-97.

He then devoted all his spare private time to the study of tornadoes, and compiled a very elaborate report on the matter, which was submitted, and in fact approved, for publication; but in some way this manuscript was mysteriously and suspiciously lost . . . (Allison Commission, 1886, p. 273).

Upon his return to Washington, Finley was assigned as assistant in the "Fact Room" where the *Monthly Weather Review* and the *Weekly Weather Chronicle* were prepared. Finley would help in the preparation of these publications until 1882. (The Fact Room was later renamed Fact and International Bulletin Room.)

It was the custom of the Signal Service at that time to send an observer into an area that had been devastated by tornadoes to make an extensive survey. Finley was ordered to make a survey on a rash of tornadoes that occurred in the Central Plains late in May 1879. His report was completed by September and was published as a Signal Service Professional Paper (Finley, 1881). Although other detailed accounts of tornadoes had appeared in Signal Service publications and elsewhere prior to Finley's report, no one had been so impudent as to suggest the establishment of a unit in Kansas City, Missouri, to forewarn of possible tornadic activity. Finley wrote,

Permit me to suggest that it would be advisable, and without doubt practicable, to station a special observer during the months of May, June, and July at Kansas City (a point easily communicated with from any part of the Lower Missouri Valley), who shall receive special reports and instructions from Washington regarding atmospheric disturbances and report the same to the various telegraphic stations throughout the valley. (Finley, 1881)

Finley was a prophet. In 1952 the U.S. Weather Bureau began issuing tornado forecasts (now watches) alerting the public that the potential for tornado activity existed. When the forecast unit was transferred to Kansas City in the late summer of 1954, one of the reasons given was that Kansas City was a favorable communication center.

There is no doubt that Finley's first offering and his avid interest in tornadoes impressed his superiors. He was promoted to private first class by the end of 1879 and given permission to continue his tornado studies. Finley also had an interest in bettering himself, as avid as that for tornadoes. In August 1879 he requested an appearance before the examining board that was screening applicants for the rank of second lieutenant. But Finley's request was not honored at that time. During this period there was an administrative change in the Signal Service—one that helped catapult Finley into recognition. General Meyer died in August 1880, and was succeeded by Gen. William B. Hazen. Meyer had not been overly interested in research. He employed one research scientist, Professor Cleveland Abbe, who was also the chief forecaster for the weather service.² Hazen, being more research oriented,

hired four senior and three junior scientists after he took command and in 1881 established a research unit called the study room at Ft. Meyer to which Finley would be assigned in 1884.

Finley continued to work in the Fact Room and in addition collected all known tornado reports from old records that covered the period 1794 through 1881. This was the project that he had begun in Philadelphia and that would appear as a report in early 1882 entitled "The Character of 600 Tornadoes." The first version contained many errors, some typographical. The paper was suppressed, corrected, and finally published as a Signal Service Professional Paper (Finley, 1884a). It consisted of the most comprehensive climatology on tornadoes set forth up to that time. More important, his deductions in that paper became the foundation for a list of forecast rules that were developed over the next year or two.

Finley re-enlisted in the Signal Corps in March 1882 as a sergeant. He was assigned the task of testing the feasibility of his plan for the reporting and investigation of tornadoes on a permanent basis. Finley moved his base of operations to Kansas City, Missouri, and traveled extensively through Arkansas, Missouri, Kansas, Nebraska, Iowa, Illinois, and Michigan during the spring of 1882 enlisting tornado spotters, then called tornado reporters, for his reporting network.

Finley returned to Washington in the fall of 1882 to compile the tornado reports collected during the spring and summer. On 9 October 1882, Sergeant Finley enrolled at Johns Hopkins University as a graduate student in preparation for an investigation of tornadoes and cyclones.

While at Johns Hopkins, completing the tornado studies of 1882, and suggesting a meteorological observatory at the university, Finley found time to marry Julia V. Larkin on 18 November 1882. Less than a month later, his multiple responsibilities brought Finley to a point of nervous exhaustion, and he was confined to an army hospital in Washington, D.C. A report from the attending physician to General Hazen on 16 December 1882, stated,

I have just made an examination of Sgt. J. P. Finley, S.C., U.S. Army and find him suffering from premonitory symptoms of Neurasthenia. He is doing too much brain work. He very decidedly needs rest. Should he continue to do as much as at present the consequences will be of very grave character. (Hamburger, 1882b)

Finley never did return to complete his studies at Johns Hopkins. In a letter to an acquaintance in April 1883, he commented that "his illness had caused him worlds of regret and that he trembled at the prospect of retrograding at a time when thought was so rapidly progressing" (Hamburger, 1883). Finley did not retrograde. He corresponded again on 22 May 1883, from the U.S. Signal Station in Detroit, Michigan making no mention of his illness. The tenor of the letter was that of his writings and correspondence prior to December 1882.

The tornado-studies project was transferred from the office of the chief signal officer to the study room in January 1884 with Finley in charge. During the year, several hundred reports of tornadoes were received from the reporting network now consisting of over 957 reporters, and a series of charts depicting the special features of groups of tornadoes for selected dates in 1884 were published in preliminary form.

² All forecasts, or (as they were called) "probabilities," were issued from the Washington headquarters by Abbe until 1873 when this duty was assumed by Signal Corps officers. The designation *probabilities* was changed to *indications* late in 1876 and to *forecasts* in April 1889. Abbe issued the first probabilities in February 1871.

These charts and a listing of the tornadoes for that year formally appeared as Professional Paper Number 16 of the Signal Service in 1885. This series included the famous tornado outbreak of 19 February 1884. Finley recorded 60 tornadoes that occurred on that day in the southeastern United States and he estimated the death toll at 800.

The most significant event regarding the activities of the tornado-studies project in 1884 was the beginning of experimental tornado predictions on 10 March 1884. These were made from the 7:00 a.m. (Washington time) weather map and covered the eight-hour period up to 3:00 p.m. A second prediction was made after a study of the afternoon weather map (3:00 p.m.) and covered the next eight hours until 11:00 p.m. During March and part of April predictions were made twice daily but for the remainder of April and for May and June, Finley made only one prediction a day that covered a 16-hour period until 11:00 p.m.

Finley's method of verifying his predictions was unique. He divided the country east of 105°W into 18 districts (Fig. 1). The districts were somewhat biased toward maps of geographical distribution of tornadoes that appeared in Professional Paper Number 7. Each district was divided into four equal parts, and predictions were made for the entire district or for any one or more of the parts. The predictions were dualistic in nature: they included conditions favorable and unfavorable for tornado activity. Finley considered both to be positive predictions, because, as he wrote, "it requires as much, and often more, study to say that no tornadoes will occur as to make the prediction that conditions are favorable for their development" (Finley 1884b). This statement is still true a century later.

He published his results for the first three months of this experiment in the *American Meteorological Journal* for July 1884 and, on the basis of his verification scheme, he attained a 96.6% degree of success. However, when conditions favorable for tornado occurrence were predicted, only 28 of the 100 predictions were fully verified, but the failure in the category "unfavorable conditions for tornadoes" amounted to only one percent. Finley continued these daily predictions until 1 August 1884.

Finley's tornado studies were not his only assignment during 1883 and 1884. There appeared in 1884 a professional paper of the Signal Service, number 14, "Charts of Relative Storm Frequency for a Portion of the Northern Hemisphere." These charts illustrated monthly and annual distribution of tracks of centers of barometric minima over North America, the North Atlantic Ocean, and Europe for a 14-year period (four years of which were incomplete). The charts were intended to be of interest and value to navigators of the North Atlantic. Finley made no attempt to explain any of the peculiarities of the distribution in the storm-track frequency figures he assembled.

Five years after his initial application, upon the recommendation of the chief signal officer, Finley was commissioned a second lieutenant in the Signal Corps in July 1884 as a result of his tornado studies. He was sent to Ft. Meyer again for instruction in military signaling and the advanced meteorology course for officers. In February 1885 he was withdrawn from the course and assigned the duties of inspector of Signal Service stations throughout the country. In addition, he was instructed to visit the chairman of the local meteorological

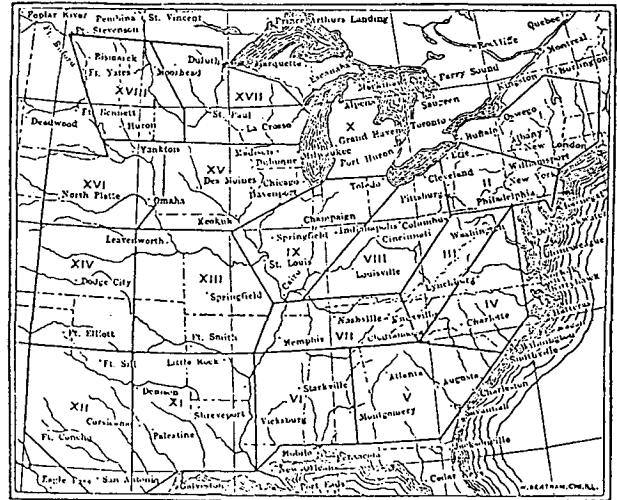


FIG. 1. Finley's districts for tornado predictions (Finley, 1884a).

committee, if one existed, at the station location and inquire as to the conduct and performance of the observers. Finley took advantage of the opportunity to speak before various educational and scientific groups on his tornado work, and to recruit additional tornado reporters. He served as inspector until May 1885.

Finley returned to Ft. Meyer and completed the prescribed course for officers, after which he was assigned to the tornado-studies project in the office of the chief signal officer and resumed his tornado predictions in June 1885. According to his report dated 30 June 1885, the number of tornado reporters had increased to 1307. Finley's stay in Washington was brief. He was sent out again to inspect Signal Service stations during August and September 1885.

The combination of Finley's apparent success at predicting tornadoes and his persistent belief that these predictions should be incorporated into official releases (indications) of the Signal Corps, elicited instructions issued by the chief signal officer in 1885: When the current weather report favored the occurrence of tornadoes, the indications would contain a special warning that violent local storms were indicated for the area of concern. The instructions also stated that the word *tornadoes* would not be used.

At this time, when Finley's tornado studies were at their peak, events were transpiring that would not only threaten his military career but would also result in the eventual transfer of the weather service from military to civilian control. Prior to the establishment of the weather service under the Signal Corps in 1870, there was some question as to where such a service should be placed in the government. The controversy between groups that favored civilian control of the weather service and those that sponsored military control became a political issue. Budgetary limitations imposed by Congress on the weather service resulted in a reduction of services and produced numerous complaints from the civilian sector. These, plus an embezzlement scandal within the Signal Corps, prompted a far-reaching investigation of the Corps by Congress. This investigation, made by the Allison Commission, was conducted from 1884 into 1886. The Allison

Commission report of June 1886 urged that the weather service be removed from army control and recommended that it be placed under the jurisdiction of the War Department and that the training center at Ft. Meyer be closed. This meant the demise of the study room.

The sudden removal of Finley from his course of instruction at Ft. Meyer had been prompted by his appearance before the Allison Commission in January 1885. While Finley's testimony before the Allison Commission and his subsequent report to it (a summary of his tornado investigations) were innocent and valid, they included material that could be used by those who claimed the Signal Corps should not be in the field of basic research, an area they postulated better suited to the civilian scientific community. In addition, Finley was one of four officers accused of harsh and abusive treatment of the enlisted personnel at Ft. Meyer (Allison Commission, 1886, p. 334). Thus, Finley, already a controversial figure within the Signal Corps, was sent on an inspection detail.

Prior to the release of the Allison Commission report and subsequent orders for closing the study room, Finley's tornado-studies project had been moved from Ft. Meyer to Washington, D.C. General Hazen recommended the change in order that Finley might "devote more time to the prosecution of his special studies of tornadoes, and which work can be properly done by constant reference to the records and charts of this office (Washington headquarters)" (Finley papers, 1885). Early in 1886, Finley was placed in charge of the Meteorological Record Division of the Signal Corps. The main function of this division was to check the meteorological observations and correct errors found in them.

Finley summarized the work performed since the establishment of the tornado-studies project through June 1886 in his report to the chief signal officer for that year. He listed the number of tornado circulars prepared for the tornado reporters (23), his own professional papers written (4), the number of tornado reporters enlisted in the network (1562), and the number of months for which tornado predictions had been made (12 1/2). The number of tornado predictions during a three-month period in 1884 was 2812.

In November 1886 General Hazen detailed Finley to New York City to assume command of the Signal Corps station there and to assist the maritime agencies of the Northeast Atlantic coast with storm warnings. There he established a system of daily storm warnings for the North Atlantic, which were cabled to London and Paris. Hazen became ill soon after Finley arrived in New York, and the acting chief signal officer, Gen. Adolphus W. Greely, ordered Finley to return to Washington in mid-December 1886. After Hazen's death in January 1887, Greely assumed command of the Signal Corps, a fact that would put more restraint on Finley's tornado work. Hazen, up until his death, believed in military control of the weather service, both the forecasting and the research activities. He had retained the civilian scientists after the closing of the study room, placing them in various divisions of the headquarters but allowing them to perform their studies as "additional duties," as was the case with Finley. However, Greely could not control the smoldering feud between the military officers and civilian scientists of the corps and proposed in 1889 a reduction by one-third of the officers assigned and an almost 60 percent reduction in the enlisted corps. This was an obvious victory for those seeking

civilian control of the service and one in which Finley would personally be embroiled.

In March 1887, at the central office, Greely established a new records division under the "attentive care" of Finley. The tornado-studies project was incorporated into the records division. The report of the records division in June 1887 contained two items about the project on tornadoes. One was that the number of tornado reporters throughout the country had attained a figure of 2376. The other was that the majority of the activity in the project on tornadoes dealt with the routine compilation of tornado reports received. No mention was made of tornado predictions. There can be no question that Finley was ordered to discontinue his predictions; the report of the chief signal officer for 1887 quite pointedly declared that "it is believed that the harm done by such a prediction would eventually be greater than that which results from the tornado itself" (U.S. Army, 1887a).

Finley remained in command of the Records Division where he "devoted himself to his duties with marked zeal and assiduity" (U.S. Army, 1889a) until June 1889. However, in his report as records officer for 1888, the activity of the tornado-studies project appears as "tornado work" and the report reflects the de-emphasis in this area: "During the latter half of the past year, but little attention has been paid to this branch of the division's work" (U.S. Army, 1888). He pleaded for a continued climatology of tornado reports, citing the long expenditure of time and labor of prior years. His report also notes that the number of tornado reporters was 2403, the highest ever.

A final effort by Finley to sustain his tornado work appears in his records-division report of 1889 (U.S. Army, 1889b). One item in this last official report on Finley's investigations of tornadoes remains with us today. General Orders Number 2 issued in January 1889 by order of the chief signal officer instructed that no storm should be called a tornado "unless there is noted a well-defined pendent, funnel-shaped cloud, with attendant rotary winds." The substance of this definition is still valid. But the death knell had already been sounded on Finley's tornado work and reporting system. It only remained for the coup de grace to be delivered, and that occurred late in 1889 and in 1890.

The Report of the Chief Signal Officer for 1890 contained a section called "Scientific Research," including this statement: "Impressed with the number and violence of destructive tornadoes during the past year, it is believed that an investigation of phenomena of this kind on their numbers, area devastated, lives lost, and other such information might be of current interest. This work was intrusted to Professor H. A. Hazen, who has given much time and attention to these phenomena" (U.S. Army, 1890a). Professor Hazen had replaced Finley as the Signal Corps spokesman and authority on tornadoes.

When Finley was relieved of his responsibilities for the records division during the summer of 1889, he was assigned to the Signal Corps station in Boston, Massachusetts, where he was also in charge of the military telegraph lines for Massachusetts and Rhode Island. It was while in Boston that he was informed by the *American Meteorological Journal* that he had won first prize in tornado essays, offered by that journal in open competition. His successor as spokesman on tornadoes for the Signal Corps, H. A. Hazen, placed third behind Finley

and A. McAdie, a doctoral student at Clark University, Worcester, Massachusetts. (The winning essays appear in volume 7 [1890] of the journal, pages 165–229). Finley remained at Boston until May 1890 when he was ordered to San Francisco to assume charge of the new forecast office there.

As a result of his tornado studies, Finley was not entirely unknown in the Pacific Coast states. By his activities as forecast official of the San Francisco office, his name became more familiar throughout the area. Finley knew the advantage of having a favorable press and cultivated it at every opportunity. Three fortuitous events in the latter months of 1890 helped spread Finley's name and reputation. Although early fall had been relatively dry, one storm moved in from the Pacific in early October. Finley predicted rain and had the foresight to telegraph the sergeant in charge of the Fresno Signal Corps station to alert the raisin growers so they could protect their crops.

The second event came in November when the report of the chief signal officer for 1890 was released. In it, General Greely stated that thunderstorms "were more destructive to life" (U.S. Army, 1890a) than tornadoes. The reaction by the press to this statement was almost instantaneous. The *Salt Lake City Times* went to some length to prove Greely's inconsistency by quoting from Greely's own book *American Weather*, published in 1888, which read, "in matters of tornadoes, Lt. John P. Finley is the one recognized authority, not only in this country, but abroad" (Finley Papers, 1890a).

The third event was another prediction. Dry conditions had continued through October and November, reaching drought proportions in the San Francisco area. On 1 December a large storm was detected approaching the coast, and Finley predicted the end of the drought. Heavy rains swept the length of California for two or three days bringing much-needed relief. It also brought Finley additional praise and recognition, deservedly so, from the populace and the press. The accurate prediction and attendant publicity came at a very opportune time for Finley. He was in the midst of a battle to save his military career.

General Greely's proposal to Congress to reduce the number of second lieutenants by one-third in 1889, plus a rather damaging efficiency report on Finley by Greely in May 1890, had placed Finley's career in an untenable position. The efficiency rating by Greely was not only a blow to Finley's ego but it infuriated him. Portions of the rating read,

. . . has moderate ability in discussing weather data and to some what less degree in weather forecasting. Is unsuited for any duty involving the control or handling of any large number of men, as he is lacking in administrative work which demands clear, unbiased judgment and breadth of thought. Cannot organize, but is himself one of the most indefatigable workers the Chief Signal Officer has ever known . . . Fair education; indomitable energy; excellent habits; and will always be a most valuable subordinate officer. Is not successful with his subordinates, as he is apt to be unreasonable in his demands upon their time, expecting from all the same intense application he himself displays. Stood No. 6 (general standing 67.2) in a class of 7 officers, after undergoing a year's instruction. Failed to be recommended (in July 1886, by the Board of Officers who

examined the class) as competent for all the duties, civil and military, connected with the Signal Service (Finley Papers, 1890b).

Finley's defense for both his retention in the military service and his eligibility for promotion to first lieutenant was threefold. First, the efficiency rating by Greely was based on a biased report made by General Hazen some four years previous. Second, Greely chose to ignore the scientific achievements of the junior officers of the Signal Corps and, indeed, downgraded these contributions publicly. And third, while Finley followed military procedures by submitting statements of qualifications, accomplishments, abilities, and the like to the chief signal officer, a duplicate set plus his assessment of the "infighting" within the Signal Corps were sent to an influential third party. This was Finley's uncle, Hiram Berdan, who lived in Washington. Berdan was the same Colonel Berdan who had formed Berdan's Sharpshooters for the Army of the Potomac during the Civil War. Berdan and his sharpshooters attained wide fame during the war, Berdan being promoted to the rank of general at Bull Run (Catton, 1952).

The supplemental information Finley sent his uncle concerned the quality of the military training he had received at Ft. Meyer. General Hazen, in 1886, had asked a board of examiners consisting of a military man and two civilian scientists to rule on the competency of the group of officers trained at Ft. Meyer in 1885. The board's first report satisfactorily passed all officers. Hazen did not accept the report and asked for specifics on each officer as to their full competency in each area, both scientific and military. The board could not guarantee that the officers were wholly competent to perform any duty that might be assigned, but added that each officer had passed a far more difficult examination than was required of the line officers of the Army.

The majority of the Signal Corps officers were "line officers"; that is, they received their military training in the infantry, artillery, etc., and then were assigned to the Signal Corps. A small group of officers, including Finley, although college graduates, received their military training at Ft. Meyer, which was considered inadequate by the line officers. According to Finley, when Greely released this information to the press it took the form that the officers were "wholly incompetent to perform their duties." Finley's letter to Berdan concluded with the fact that the scientific members on Hazen's board of examiners in 1886 were also judges on the board that awarded him *The American Meteorological Journal's* First Prize for the Best Scientific Essay on Tornadoes in early 1890.

Berdan forwarded Finley's information to the Adjutant General's Office of the War Department requesting that the secretary of war be made aware of the contents. On his own accord Berdan forwarded an article that appeared in the *Washington Star* during November 1890. The article was quite favorable to the Signal Corps and its efforts in the field of weather forecasting. It presented the difficulties faced by the forecaster and the procedures involved in arriving at a forecast. The portion of the article that riled Berdan admitted that the forecaster must have a knowledge of the science of meteorology, but said that experience was the dominant factor in arriving at a successful forecast. The article summed up its argument by stating that "a man who has had three months of actual experience as a prognosticator is worth ten who have

spent half their lives in the mere study of what ought to happen if everything went off according to program, which it never does" (*Washington Star*, 1890). Berdan enclosed a list of Finley's published papers and the various scientific societies of which he was a member, and concluded that "he [Finley] had reason to believe that General Greeley was working against him" (Finley Papers, 1890c). In addition, Berdan included the favorable press clippings on Finley's successful West Coast forecasts.

There is no doubt that Finley's petitions and the influence of his uncle carried much weight with the secretary of war as the names of all surplus second lieutenants in the Signal Corps were submitted to Congress for nomination into the line of the army in January 1891. Finley was notified on 7 February 1891 that he had been commissioned as second lieutenant and assigned to the 19th Infantry. He immediately proceeded to submit his name for promotion to first lieutenant before a board of officers convened for the examination of officers for promotion at the presidio in San Francisco. On 23 March 1891, the board rendered the decision that Finley was "deficient in the professional qualifications necessary to enable him to perform efficiently the duties of the grade of 1st Lieutenant of Infantry" (Finley Papers, 1891). The board added, however, "in view of the somewhat unusual circumstances attending this case the Board respectfully commend him to the favorable consideration of the War Department." The promotion board was well aware of Finley's political connections and deftly passed the case on to the War Department for the final decision. It was a favorable one. Finley was promoted to first lieutenant effective 15 July 1891, and assigned to the 9th Infantry. He remained in charge of the San Francisco Forecast Office until relieved of this post in October 1891 by the chief of the Weather Bureau, Mark A. Harrington, the first civilian head of the bureau.

Finley was stationed with the Weather Bureau in Washington from November 1891 until May 1892, although his official military post was Madison Barracks, Sackets Harbor, New York. While in Washington, he was assigned the task of compiling a special report on the climatology of the Dakotas, a document ordered published by the 52nd Congress. It appeared in print under the title "Certain Climatic Features of the Two Dakotas" in 1893; it was his last official weather publication for the government. Finley left Washington in May 1892 and was assigned once more to the San Francisco office of the Weather Bureau under orders of the secretary of agriculture. The act of 1 October 1890 transferring the weather duties of the Signal Corps to the Department of Agriculture had provided that "officers of the Army, not to exceed four, expert in the duties of the weather service may be assigned to duty with the Weather Bureau . . ." (U.S. Congress, 1890). However, as Truman Abbe states in his book on his father, Cleveland Abbe, "law authorized four Army officers paid by the War Department to be assigned to the Weather Bureau and only two were assigned at the time" (Abbe, 1955). One was Maj. S. S. Rockwood, who was assistant chief of the Weather Bureau under Harrington. The other was John Park Finley. While Finley was detailed to the Department of Agriculture, he published newspaper articles and lectured throughout California during the period May to October 1892 (Finley, 1925).

Finley's career as a military meteorologist came to an end on 27 October 1892, when he was ordered to join his regiment in the 9th U. S. Infantry at Fort Ontario, Oswego, New York. Although his primary interest was still meteorology, the civilian control of the weather service was complete, and Finley, who had fought for and won his military status, chose to return to military duty. A brief military document succinctly covers his position:

Lt. Finley, who upon reduction of the Signal Corps, and the transfer of the Weather Bureau to the Agricultural Department, was transferred to the 9th Infantry, was one of the officers detailed to the Weather Bureau under the Act of October 1, 1891. He remained on that detail until October 1892 when he asked to be relieved and to join his regiment, stating that he desired to give his whole attention to his military duties. The Secretary of Agriculture approved his request and added that Lt. Finley has "proven an able and efficient officer." Lt. Finley was accordingly relieved and ordered to join his regiment (Finley Papers, 1893).

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- The major portion of the material in this paper was obtained from Finley's publications, the "Finley Papers" (National Archives) and the Reports of the Chief Signal Officer of the Army. These references are listed here in generic form. A complete listing appears in NSSL Tech Memo No. 97.
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mote this goal through continued publication of history-related articles in the BULLETIN and through history-related talks at the annual meetings of the Society.

- 2) To promote activities that help define and clarify the history of the discipline. The committee plans to establish a tape-recorded interview program and seeks participants for this program both as interviewers and as respondents. In addition, the committee hopes to obtain in-depth studies for publication in the *Historical Monographs* series.
- 3) To initiate a program for encouraging systematic documentation of the history of the field. The committee plans to identify individuals, projects, institutions, and events for historical documentation. Also, the committee hopes to formulate collection strategies for material relating to the history of the atmospheric sciences (including manuscripts, books, photographs, meteorological instruments, and other technical apparatuses) and to initiate work on locating, preserving, making accessible, and cataloging such material.
- 4) To serve as a clearinghouse for information for members, students, historians, and other scholars.

Among these objectives, the committee will give high priority to the tape-recorded interview program.

In all of its work, the committee asks for cooperation. Members who have advice, news, or material the committee should know about or who would like to help, please contact the chairperson or any of the committee members:

Chairperson: Gisela Kutzbach (1138 Shorewood Blvd., Madison WI 53705; (608) 262-0316, (608) 238-0420). Members: Helmut Landsberg (Institute for Physical Science and Technology, University of Maryland, College Park, MD 20742); George Platzman (Department of Geophysical Sciences, University of Chicago, 5734 S. Ellis Ave., Chicago, IL 60637); Ronald Taylor (Division of Atmospheric Sciences, National Science Foundation, Washington, DC 20550); Morley Thomas (Environment Canada, 4905 Dufferin St., Downsview, Ontario M3H 5T4); Warren Washington (National Center for Atmospheric Research, P.O. Box 3000, Boulder, CO 80307).

meetings of interest

23 November–5 December. The World Meteorological Organization (WMO) Committee of Atmospheric Sciences (CAS) is sponsoring a two-week global workshop on tropical cyclones in Bangkok, Thailand, from 23 November to 5 December 1985. The workshop is cosponsored by the UNDP and the U.S. State Department Office of Foreign Disaster Assistance.

This workshop is designed to bring together tropical-cyclone forecast and research experts from all the ocean basins where these storms occur in order to treat the tropical cyclone from a global perspective. Attention will be focused on better methods for improved forecasting and for better understanding of the physical processes of these storm systems. About 80 forecasters and researchers are scheduled to attend. The workshop

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