
BOOK REVIEW

TITLE: *The Blue Hill Meteorological Observatory; The First 100 Years—1885–1985.*

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With the founding and establishment of the Blue Hill Meteorological Observatory in 1885, one of the most significant pioneering efforts concerning the science of meteorology began within the United States. Blue Hill symbolizes these efforts in terms of the research carried out at this observatory and also work performed by well known scientists who visited frequently these premises. Throughout the book, this theme of pioneering in meteorological research is constantly stressed. This reviewer shall attempt to capture some of the outstanding highlights.

Abbot Lawrence Rotch, founder, his efforts and extensive travels propelled by his dreams concerning Blue Hill, enabled the observatory to become well known throughout the world. He visited numerous European meteorologists, for example, and obtained new ideas concerning meteorology and its instrumentation. He then would apply this innovative knowledge for the advancement of the observatory. Soon, Blue Hill became noted for numerous and varied accomplishments, some of which are as follows; one of the first stations in the United States to take continuous records of chief weather elements (1885); the first daily weather map published by the Boston weather office was delivered to Blue Hill (1886); observation procedures which were copied by other weather stations throughout the United States and the world; extensive cloud studies considering their growth, structure, and decay (1889); meteorological instruments developed and/or redesigned for better operation, precision, and durability; upper air motions surveyed by use of instrumented kites (1894); health problems which may be related to weather changes; hot-air balloons and their application to upper air research (1899); assistance in the development and flying of heavier-than-air craft which was being done by the Wright brothers (1908); and much more. Soon Blue Hill became so notable that meteorologists from other nations requested Blue Hill to help them with meteorological problems.

Due to this reputation, Blue Hill eventually became host to illustrious meteorologists and scientists who came not only from other parts of the United States but also Europe, to see the observatory and also to perform research at the well-equipped laboratories. Following is a partial list of these individuals: Bjerknes, Langley, Dewey, Brooks (C. F. and Edward), R. DeC. Ward, McAdie, Haurwitz, Namias, Spengler, J. M. Mitchell, Bergeron, Wexler, and Goody.

A. L. Rotch directed Blue Hill until his death in 1912. For a short duration following this sad event, Mrs. Rotch became the acting director until a new one could be found. R. DeC. Ward served only six months. Subsequent directors were as follows: A. G. McAdie, C. F. Brooks, and R. Goody. It should be noted that the author of this book, Conover, served as Acting Director from September 1957 to June 1958 until Dr. Goody could assume the reins of Directorship. After Goody's tenure, Blue Hill became an official station of the

National Weather Service network and was operated under the Boston Office. Each of the directors brought to Blue Hill unique and varied contributions and talents. Rotch, the founder, performed extensive work in observations, instrumentation, furnishings, architectural design, construction, and more. He took a personal interest in every operation and activity on the Hill, doing this even though he was absent much of the time for travel to Europe and other parts of the United States. McAdie modernized the observatory in a special manner—by the incorporation of a constant dependable electrical supply; he also introduced his own temperature scale, measurement scales of other sorts, an expanded aerology program, the initiation of fog dispersion studies, and enthusiastically promoted the cloud atlas; McAdie worked hard to help raise needed funds for Blue Hill. Brooks contributed to the work by his interests in air turbidity, radio transmissions, radiometeorographs, the Mount Washington Observatory (which was beginning about this time—1932), and solicited help from the American Meteorological Society. Brooks also enabled the observatory to become actively engaged in the training of military personnel in meteorology during World War II (1942). He greatly cared for and guided Blue Hill through some extremely difficult financial times, successfully selling the observatory's services to various clients to obtain badly needed funds to underwrite the operations. Goody introduced a strong dose of theory to meteorology at Blue Hill. This took the form of stratospheric research, his specialty. He also examined the previous meteorological records, with the help of the staff, correcting some of the records and extracting research information from others. Goody was instrumental in obtaining permission from the U.S. Government for Blue Hill to become an active station for the National Weather Service when neither Harvard, Cornell, nor MIT wanted to assume the significant responsibility of supporting and running Blue Hill.

The resident staff at Blue Hill Meteorological Observatory significantly contributed to meteorology through their many valuable services and talents. In February of 1886, Henry Clayton joined the resident staff of the Blue Hill Observatory and took charge of the observational program. He came to the Observatory from Tennessee where he had been instrumental in developing the weather observing program. Clayton was followed by Sterling Fergusson in 1887, a young man who was also from Tennessee. Fergusson, a mechanical genius, was placed in charge of maintaining and developing the Observatory's instruments. The two men were extremely valuable to the extensive observation program. Clayton performed experiments and investigations with the instrumentation; Fergusson designed and/or redesigned many instruments to make them even more precise, accurate, and dependable. Both of these men departed at Rotch's death, but Fergusson returned much later. He served until his death. This staff was eventually joined by two ladies, Sally Wollaston and Lorna Ridley. The observations at Blue Hill fell under the aegis of Sally Wollaston who served as chief observer. She began her duties in 1942 and became chief observer in 1944. Sally also worked on solar radiation data in addition to her other duties. Her sister, Frances, joined the staff in 1943. Lorna Ridley was hired as an observer in 1955. In 1958, Sally and Lorna resigned, going to Penn State University for graduate work. It should be mentioned too that Sally helped Conover to complete the winter cloud systems studies before she left. It is significant that Blue Hill was open to both men and women to help in the advancement of meteorology. Everyone's talents are needed, then and now.

Throughout the entire volume, the documentation is enhanced by numerous black and white photographs and diagrams; illustrations included show the ever changing staff, instruments, buildings, the grounds, experiments, data charts and tables, and letters. Some of the letters included in the text were those which Blue Hill received from former employees congratulating the observatory upon its 100th Anniversary. These letters came from those who were not able to attend for one reason or the other. A complete chronological list of events is included so that highlights may be quickly noted. The book is very well written and Conover's style is easy to comprehend. He is to be commended for a

job well done. The work is an excellent treatise concerning the history of science. The fact that the story surrounds one single organization introduces a common theme throughout the whole book. This edition will be a valuable asset to any private or public library. The book indeed presents a keen insight into the development and preservation of one of the most famous observatories in the world, **The Blue Hill Meteorological Observatory**. May she be around for another 100-plus years!

Merlin W. Zook