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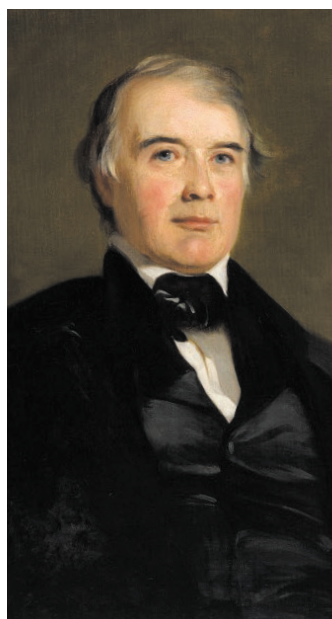
James Pollard Espy: the Storm King

On June 1 and 2, 1840, Professor James Pollard Espy of Philadelphia delivered two lectures on the “Law of Storms” at Lyceum Hall, now the Alexandria History Museum at The Lyceum. While perhaps not as obsessed as Weather Channel aficionados and storm chasers of the 21st century, weather fascinated people in the 19th century, too. Espy, who developed a convection theory of storms, was a well-known and influential figure though some of his theories may sound odd today.

The ad for Espy’s lecture noted:

“In these lectures a new theory, founded on experimentation and observation, will be developed, by which it will be clearly understood how clouds are formed; and a method shown how their height, when forming, maybe ascertained by the Thermometer. ... Also, a very simple means will be demonstrated how any careful observer may know, in what direction a great storm is raging, several hundred miles from him, and many other interesting phenomena never before understood, will be explained, such as hail storms and tornadoes.”

The writer of the ad, beyond his affinity for commas, suggests that audiences were not simply interested in weather



PHOTO/NATIONAL PORTRAIT GALLERY/SMITHSONIAN INSTITUTION
 James Pollard Espy by Thomas Sully, 1849.

but in practical ways they could themselves understand weather and climate.

Espy was born May 9, 1785, in Pennsylvania and spent his early adulthood as a teacher and lawyer. At the age of 43, he took an interest in studying what causes storms and began to pursue a career in meteorology. Over the next five years, he developed his convection theory of storms. Convection, as it relates to weather, is the upward movement of warm air in storms that gives them self-sustaining power.

In 1834, Espy became me-

eteorologist for both the Franklin Institute and the American Philosophical Society – both in Philadelphia. As chair of a joint committee, he established a network of weather observers to study storms. He convinced the Pennsylvania legislature to appropriate \$4,000 to equip an observer in each county with a barometer, thermometers and a rain gauge.

In 1836, Espy abandoned teaching to focus solely on lecturing before scientific bodies and popular audiences and he illustrated these lectures with charts, illustrations and globes. It was then that he became known as the “Storm King.”

In 1840, he lectured before the British Science Association and the French Academy of Sciences. French physicist and astronomer Francois Arago said, “France has its Cuvier, England its Newton, America its Espy.” Good company indeed. In 1841, Espy published his convection theory in “The Philosophy of Storms.” In it, he also argued that forest fires, because of their heat, can cause rainstorms. He recommended burning Appalachian forests to end major droughts.

Espy went so far as to lobby Congress and the Pennsylvania legislature for funds to study the possibility of starting forest fires to create rain. Enough people had observed, however,

that forest fires don’t necessarily lead to rainfall. He received no money to pursue this theory.

Before Espy’s first Alexandria lecture in 1840, Lyceum Company president Benjamin Hallowell wrote in the Alexandria Gazette, “This distinguished individual has consented to favor our citizens with one or two lectures ...” Hallowell also mentioned Espy’s theory of burning forests to create rain, downplaying it as “incidental” and the “least interesting and important” part of his theory. Espy lectured at Lyceum Hall four more times in 1842 and once more in 1847.

Espy was a pioneering Meteorologist. In his life, he served as meteorologist to the War (1842) and Navy (1848) departments and was first meteorologist to the United States Government (1843) under the Surgeon General. He developed the use of the telegraph in assembling weather observation data so he could study the progress of storms.

Espy laid the basis for scientific weather forecasting. And on several occasions, he fascinated Alexandria audiences who wanted to learn more about the storms and weather forecasting.

Out of the Attic is provided by the Office of Historic Alexandria.