

A Science Service Feature

Released upon receipt
but intended for use
September 8, 1933

? WHY THE WEATHER ?

Mailed September 1, 1933

FRANKLIN ON NORTHEAST STORMS

By Charles Fitzhugh Talman,
Authority on Meteorology,

Apropos of the recent "northeast storm," Benjamin Franklin's discovery concerning the movement of such storms, which I mentioned a few days ago, is first recorded in a letter to Jared Eliot, in Connecticut, dated 1747, in which Franklin says:

"We have frequently along this North American coast storms from the northeast, which blow violently sometimes three or four days, Of these I have had a very singular opinion some years, viz, that, though the course of the wind is from the northeast to southwest, yet the course of the storm is from southwest to northeast; that is, the air is in violent motion in Virginia before it moves in Connecticut, and in Connecticut before it moves at Cape Sable, etc."

In 1750 Franklin wrote more fully to Eliot on the same subject, telling how he was first led to this opinion. He had planned to observe an eclipse of the moon at Philadelphia (the date has since been fixed as Oct. 21, 1743) but was prevented by the clouds of a northeast storm, which, however, as he subsequently learned, did not begin at Boston, 250 miles farther northeast, until the eclipse was over. He afterward collected reports of other such storms and found it to be "a constant fact that northeast storms begin to leeward." He suggested the following explanation:

"Suppose a great tract of country, land and sea, to wit, Florida and the Bay of Mexico, to have clear weather for several days, and to be heated by the sun, and its air thereby exceedingly rarefied. Suppose the country north-eastward, as Pennsylvania, Nova Scotia and Newfoundland, to be at the same time covered with clouds and its air chilled and condensed. The rarefied air being lighter must rise, and the denser air next to it will press into its place; that will be followed by the next denser air, that by the next, and so on."

Not until the thirties of the nineteenth century was science able to give a better though still incomplete explanation -- the rotary movement of storm winds.

(All rights reserved by Science Service, Inc.)

SCIENCE SERVICE
21st and Constitution Ave.
Washington, D.C.