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A Science Service Feature.

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
Secretary, American Meteorological Society,
Says:

OUR WINDS TURN TO THE RIGHT.

Wind in the northern hemisphere is constantly tending to swerve to the right. Let it start from the north headed directly south and presently it becomes a northeast wind. Let it start as a west wind, and in turn it is a northwest wind. The reason is that the earth rotates on its axis, and thus turns the cardinal points under the moving air. This turning is greatest at the poles, where it amounts to 360 degrees in a siderial day, that is, in the time it takes the earth to make a rotation to the same position with respect to the stars. Only at the equator does a north-south horizontal line not turn as the earth rotates.

Were the globe to cease its rotation, and were its surface smooth, without mountains or valleys, the hot air of the tropics would overflow continuously straight poleward and the return current come straight equatorward beneath. In the northern hemisphere the wind aloft would be from the south, and at the surface from the north. There would be none of the deflecting force to produce the curved wind paths. The effect of the rotating motion is to cause all winds blowing in the northern hemisphere to curve off to the right, and all those of the southern hemisphere to go to the left of the direction in which gravity would send them.

A familiar instance of deflection of wind occurs in the seabreeze which visits the Atlantic seaboard on afternoons of very hot days. It is first felt coming directly from out to sea as the cool air from the ocean starts directly landward. Its beginning is but a short distance out to sea, and it has not travelled for long enough to be much deflected. But as the breeze continues the air arriving having been in motion for longer and longer periods the direction veers more and more to the right.

(Tomorrow: Weather Uninfluenced by the Moon.)

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