

June 26

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
Discusses

DAYTIME BREEZES

On a fair summer day, there is frequently no breeze early in the morning. The air may seem quite muggy, and the rising temperature might lead us to expect oppressive heat by noon. Fortunately, however, this noonday heat is often relieved by a pleasant breeze which springs up quite regularly in the middle of the morning and lasts until nearly sunset.

Why do we have this daytime wind? It will be remembered that in summer in fair weather there is quite a steady, moderate, westerly wind aloft in our latitudes. This wind is always stronger above the earth's surface; at the ground the air is delayed by friction and hindered by various obstacles so that it does not move so freely and a light wind tends to die down. On climbing a mountain, the increase of wind with altitude may usually be noticed. In the morning, when the sun's heating has warmed the lower air, little overturnings occur, the different layers of air mingle, or convections starts. If the masses of warm air displaced upward rise high enough, big white cumulus clouds, or fair weather clouds, appear during the day. This mixing of upper and lower layers continually brings down to the ground some of the more rapidly moving free air from above and gives us our general daytime breezes. The sea breeze and valley wind are special cases of daytime winds due to local daytime heating.

(Tomorrow: The Afterglow)

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