

No. 312

A Science Service Feature

May 12

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
describes:

THE COMING OF A CYCLONE

Rarely is the passage of a cyclone or general storm so well punctuated as was that of April 21 to 22 from the Great Plains to the Atlantic seaboard. While the characteristics were not the same everywhere in its path the weather sequence in southern New England was representative. People were still congratulating themselves on the quick termination of the chilly rain of Easter and enjoying the bright sunshine, beautiful blue sky, and the fleecy clouds riding along with a bracing west wind, when the snowy heralds of the next advancing cyclone insidiously began to cover the sky. Long, white, cirrus streamers rode out of the west-northwest as if pulling the cirro-stratus veil that followed. As the thin, white sheet of falling snow crystals came before the sun a brilliant colored halo formed. But with the thickening of the snow veil as its under portions fell lower and lower, the halo faded and the sky became gray and mottled. The strong, west wind died, and a chilly east wind stole in. Late in the evening the reflection of city lights showed that the under surface of the cloud had fallen to only a mile above the surface. Shortly after midnight melted snow began to reach the ground as cold rain. Now a warm wind began to slide in under the cold air aloft and above the cool air at the ground. A thunderstorm just before daybreak revealed the presence of this warmer air when some of the heavier cold air had forced large masses of it to rise rapidly. For some hours the warm wind dripped warm raindrops into the cool easterly breeze, and a light fog formed and thickened.

As the warm wind wore its way downward and became warmer there was an increasing drizzle of fine drops from the cloud sheet where it rubbed over the cool, damp wind below. Also the barometer fell rapidly as the air above became lighter and lighter. Shortly after noon the lower layer of cool air was blown away, and the balmy south wind, with its racing nimbus clouds was evident. Here was the heart or trough of the cyclone 24 hours after its first signs became visible. A clearing thunderstorm followed soon, and generally fair weather was re-established by sunset.

(Tomorrow: When a Squall-Line Passes.)
All rights reserved by Science Service