

No. 678

A Science Service Feature

July 14

? WHY THE WEATHER ?

By Dr. Charles F. Brooks
of Clark University.

HUMIDITY VS. HIGH TEMPERATURES

The morning is sunny and hot - the mercury starts to climb - how far can it go? What limits its rise? Perhaps you think the highest temperatures should occur in the equatorial regions. These are so very damp, however, that as soon as the temperature reaches about 85 degrees Fahrenheit convection makes heavy clouds and showers form and shut off some of the sun's heating. If the temperature reaches 88 degrees thunderstorms are practically certain to occur, as they do almost daily for much of the year.

In the United States we frequently get much higher air temperature because the air is drier. The dry, moderately high interior, comprising the western plains states is our main large hot area. Here people are not startled to see the thermometer reach 110 degrees. In desert regions where there is still less water vapor and cloudiness to screen the earth from the blazing sun, still greater extremes have been recorded. Death Valley in California can boast of 134 degrees, and a place in Tripoli, 137 degrees, the world's record. Along the coasts temperatures are lower, 90 to 95 degrees are the maxima on the Pacific, about 100 degrees along the Atlantic, and 100 to 103 degrees on the Gulf Coast, all with off-shore dry winds. Mountain regions and high plateaus are favored regions also, with 95 as a usual upper limit. Florida boasts still lower maxima. It should be remembered, however, that the high humidity which prevents high temperature also makes heat less bearable.

(Tomorrow: Evaporation Makes Heat Endurable)

All rights reserved by Science Service.

SCIENCE SERVICE,
B and 21st Sts.,
Washington, D.C.