

No. 535

A Science Service Feature

Jan. 27.

? WHY THE WEATHER ?

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

LOCAL ASPECTS OF COLD WAVES

As cold waves progress in a general southeasterly direction across the country, they are modified somewhat by local conditions. As is well known, "the open waters of the Great Lakes have a distinctly tempering influence on the bitterly cold winds of a cold wave." On the contrary, passing over a snow covered surface may make the lower portion of the cold wind still colder, as was notably the case in early December, 1917, in a rather narrow belt of deep snow in the immediate vicinity of the Ohio River. Near the windward edge of this belt the temperature at Cairo, Ill., was seven degrees below zero Fahrenheit; on the leeward side, at Nashville, Tenn., it was zero. Between, in the belt, temperatures were as low as 25 below in western Tennessee, 20 below in western Kentucky, 30 below in southern Indiana, and 31 below in southern Ohio. In western Tennessee the four stations with minima of 20 degrees below zero or lower were in a narrow belt immediately to leeward of the heaviest snow belt, but still within the region with six inches or more of snow on the ground. Over bare ground, cold waves tend to peter out, as for example along the middle Atlantic coast and southern New England ^{during} the early part of the present winter.

In Texas and the Gulf region a cold wave usually comes with a "norther." Over the plains, the northerly wind attains great speed at times. Extraordinary temperature changes have been recorded, even a drop of 50 degrees Fahrenheit, or more, in two or three hours. Last month one morning temperatures were well above 70 degrees Fahrenheit in southeastern Texas but below zero on the panhandle.

(Tomorrow: Outdoor Humidities in Winter)

All rights reserved by Science Service, Incorporated.

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