

A Science Service Feature

Released upon receipt  
but intended for use  
March 24, 1932

? WHY THE WEATHER ? Mailed March 17, 1932

By Charles Fitzhugh Talman,  
Authority on Meteorology.

HIGH-LEVEL SPORES

One of the new scientific jobs of aviators is to study the contents of the atmosphere thousands of feet above the earth. Besides making counts of inorganic dust particles, the flier collects insects, spores, pollen grains and other varieties of living matter, and a surprising amount of such material has been found at high levels. Recently the U.S. Bureau of Plant Industry has been using aircraft to determine the heights at which spores of the black stem rust - a serious pest in grain fields - occur in the spring wheat area. The spores are caught on glass microscope slides covered with a thin film of vaseline. R.U. Cotter, of the Bureau mentioned, says of the results:

"It has been found that rust spores of this species may be carried by the winds as high as 10,000 feet above the surface of the earth. From this height it takes some time for the spores to reach the ground. Investigators working with white-pine blister rust have found that spores of that rust falling in a perfectly still atmosphere from a height of one mile require 55 hours to reach the earth. As black stem rust spores are but slightly larger than those of blister rust, the time required for them to fall the same distance would be only slightly less. Once these spores are carried into the air, unless brought down by rain or some other agency, they may be blown long distances before falling. "

(All rights reserved by Science Service, Inc.)

-----  
SCIENCE SERVICE  
21st and Constitution Ave.  
Washington, D.C.