

A Science Service Feature

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? WHY THE WEATHER ? Mailed April 28, 1930.

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POLLEN IN THE AIR

Of the many kinds of dust, organic and inorganic, found in the atmosphere none is more interesting than pollen. This material is so light that enormous quantities may be present in the air at any one time, and it is often carried hundreds of miles by the winds. Pollens from plants of many species are responsible for hay fever, and studies have been undertaken in recent years to determine the normal seasons of prevalence of the principal hay-fever pollens in different regions, and the way in which the amount of pollen present varies with weather conditions.

In the northern United States and Canada tree pollens are most abundant in the spring. A curve representing the variations in the total amount of pollen present from day to day usually shows very marked peaks, corresponding to profuse pollination of a certain tree species. In a typical case, elm was responsible for a very high peak in March, ash for one in the middle of April, and oak for one at the end of April and the beginning of May. The main season of grass pollens is in the late spring and early summer, with similar peaks for different species, though not so pronounced as in the case of tree pollens. From early August to early October the bulk of the pollen in the air is that of ragweed; said to be responsible for more than 90 per cent. of all the hay fever cases occurring in eastern North America.

For some years O.C. Durham, a botanist now living in Indianapolis, has been conducting "pollen surveys" in different parts of the United States, and a country-wide survey is now conducted annually under his direction during the ragweed season. Many stations of the U. S. Weather Bureau cooperate by exposing every day an oil-coated glass slide to catch the pollen in the air. Each slide remains in the air for 24 hours. The slides are dated and sent to Mr. Durham, who counts the pollen grains with the aid of a microscope.

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