

your remembrance the help you promised me last year.

Sincerely yours,

(Signed) K. LINSBAUER.

L. B. BECKING

DEPARTMENT OF BOTANY,
STANFORD UNIVERSITY, CALIFORNIA

REQUEST FOR PAPERS ON GEOLOGIC DIFFUSION

I HAVE received from Professor Raphael Ed. Liesegang, of the Institut für physikalische Grundlagen der Medizin, Schloss Str. 21, Frankfurt am Main, who is well known for his studies of diffusion and of the phenomena generally referred to as "Liesegang rings," a letter in which he requests that geologists who may publish, or who have recently published, papers dealing with the relation of ore deposition to colloid chemistry or diffusion will forward to him copies of their works. He explains that he desires these for abstracting for the "Kolloid Zeitschrift" and for use in the preparation of new editions of his books on *Geologic Diffusion* and on *Agates*. Hitherto he has obtained such papers by personal letters to their authors, but the present postage rate from Germany is so high as to make a continuance of this practice a heavy burden on his resources.

GEO. OTIS SMITH,

UNITED STATES

GEOLOGICAL SURVEY

Director

ATMOSPHERIC POLLUTION

READERS of SCIENCE have been in touch with the work of the Committee for the Investigation of Atmospheric Pollution. In the issue for April 22, 1921, a review of the Sixth Report is given, and in the issue for November 28, 1919, a summary of the Fourth Report.

The Seventh Report has now appeared¹ giving results of measurements of the deposits from 31 stations. During the year, automatic apparatus for measuring suspended impurity was set up at six stations.

The tables are similar to those in previous reports, and cover:

1. Monthly deposit for two selected stations, representative of high and low deposits such as central Birmingham and Rothamsted.

¹ M. O. 249. Meteorological Office, Air Ministry, London, 1922. Price 2s.

2. Total solids deposited monthly at all stations.

3. Mean monthly deposits at all stations for the summer half years, *i. e.*, April to September, 1919 and 1920.

4. Mean monthly deposits at all stations for the winter half years, *i. e.*, October to March, 1919-1920 and 1920-1921.

5 and 6. Classification of the stations according to amounts of various elements of pollution.

7 to 10. Totals of stations as classified for each element of pollution.

There is also a discussion of the type of deposit gage. The metallic gage, even when varnished, gave traces of metallic salts; and the glass gage proved too fragile; and finally enameled stoneware was adopted. One set of gages has been provided with Nipher shields to improve the catch; and it would seem as if the amount so caught now agreed closely with the catch of the rain gage, which was not the case previously.

A twin atmospheric pollution gage has been devised and put in operation at Rochdale by Dr. Ashworth and an attempt made to measure the quantity of impurities brought into the town and the amount carried out.

The west wind brought 14.8 tons per square kilometer; and 11.84 tons were carried out by the east wind. The data covered a period of five months. The amount brought in by the west wind, however, is not sufficient to account for Rochdale's high atmospheric pollution.

From the records of the instruments at the Meteorological Office it would appear that in London domestic fires are responsible for nearly two thirds of the total smoke.

The relation between health and impurity is discussed by Dr. J. S. Owens.

Curves were prepared in which the daily deaths of London were plotted with the data for maximum suspended impurity in the air. Temperatures were also considered.

There is a tendency for the death rate to reach a maximum when the impurity is highest or rather a little later.

On the whole there is no obvious relationship between the quantity of impurity and the number of deaths in London.

Dr. Owens also contributes an article on "London Fog in November," describing measurements made of the black particles. These