

Reference to the data obtained for the year ending February 28th, 1909, shows that in certain important respects the results differ markedly from those of the preceding year. Thus, the amount of nitrogen (present as free ammonia, albuminoid ammonia and nitrates) washed out of the atmosphere and furnished to the soil per acre, during the twelve months, was 8.364 lbs.—practically twice the quantity reported the year 1907-08. An examination of the monthly precipitations shows that the rain for September, October and November was unusually rich in ammonia. The explanation of this extraordinary abnormal richness of the rain last autumn may be given in the words of the Chief Chemist, Mr. Frank T. Shutt, M.A.: "A very severe drought prevailed during August, September and the first three weeks in October, 1908, the rainfall being considerably below the average for these months. This excessive dryness of the weather allowed the bush fires, which are not unusual at this time of the year, to spread and gain very considerable headway. Fires were common, not only in the district known as the Ottawa Valley, but also over large territories in Ontario and Quebec and the northern part of New York State. These fires raged almost continually, the rainfalls being very light for many weeks, so that for two months, more or less, the atmosphere was heavily charged with smoke. Hundreds of acres of forest were burnt and thousands of dollars worth of timber destroyed. So dense was the smoke at times that for several days together at Ottawa it was difficult to see clearly for many yards, and the irritation to the eyes and mucous membrane of the nose and throat was excessive. Not until the heavy rain of the 24th and 25th of October was the atmosphere again cleared. This smoke naturally contained large proportions of ammonia as a product of combustion and hence the scanty precipitations that occurred during these weeks were exceptionally rich in that constituent. To this cause then we attribute the exceptional and phenomenally high results recorded for the year."

The detailed discussion of the results, appearing in the forthcoming report of the Chemist, will, we are assured, bring out several other interesting points regarding the amount and composition of the year's rain and snow.

#### NEW MEMBERS.

The following gentlemen have recently been elected ordinary members of the Ottawa Field-Naturalists' Club: Mr. Chas. H. Bennett, Ottawa; Mr. W. H. Bell, Nepigon, Ont.; Prof. S. Blair, Macdonald College, Quebec.; Mr. L. B. Brown, Toronto; Mr. H. C. Duff, Norwood, Ont.; Mr. H. T. Gussow, Ottawa; Dr. C. Gordon Hewitt, Ottawa; Dr. Julius Klotz, Lanark, Ont.