It would far exceed the limits of time alloted to me to enter fully into the progressive steps of the investigation or history of ozone, for it has engaged the attention of physicians in England, and on the continent of Europe, and I am happy to say, that some members of the American Association have devoted considerable attention to it, and I have deemed it of sufficient import, to lay before the section the result of some eight years of investigation, or nearly 6,000 observations. This includes observations during the visitation of the cholera in 1854, and I heartily trust that the Association may, by its influence, extend these observations through the whole of the United States territory, and, as far as practical, throw some light on its action in the animal and vegetable kingdom, and I am sure a subject of so much importance, and which must (if we are to believe the report of some investigators) exert an influence on both the health of animals and of plants, will be at once a sufficient ground for extending such observations, which should be as uniform as possible.

The method of estimating and detecting the amount of ozone, is by what is called the *Ozoneometer*, which is nothing more than slips of paper, wetted with the solution of starch and iodide of potassium; these became blue on exposure, owing to the oxidization of the potassium by the ozone, and the setting free of the iodine, the formula I use, and the one generally adopted is ʒi of starch boiled in ℥i of distilled water, and when cold 10 grains of the iodide of potassium is mixed with it, it is quickly spread on paper and dried in the dark, and must be kept in a dry place, and free from light until required; when they are placed in a situation shaded from the sun and rain, these strips are one-half an inch wide, and from three to four inches long. Dr. Moffatt, an eminent English physician, and who has paid much attention to the subject, places his slips of paper in a box, without a bottom, so as to be *excluded* from the light; but so far as my observations go, I have found so little difference in the two methods, that I have continued that of Schonbien's, as I have before stated, and expose the slips of paper to light, but *excluded from the sun and rain.* The amount of ozone present is estimated, in 10ths the deep shade or saturation, being 10, and diminishing in depth of shade to 0.

It has also been asserted that slips of paper placed at high elevations, has exhibited a deeper shade. To test this fact, I exposed slips of prepared paper at an altitude of 80 feet, on the top of a pole or mast, which is used for collecting atmospheric electricity