the animal inoculations treatment of the specimens with penicillin was omitted. All animals after inoculation were kept in a separate room so that chance exposure to infected stock could be excluded.

The successful isolation was made in mice. Slight pulmonary lesions occurred in one mouse of the third passage and in the fourth passage a scant 2-plus hepatization was produced. These lungs were inoculated into 10-day eggs and on first egg passage the pooled allantoic fluid possessed a CCA titer of 1/640.

This allantoic virus was identified as Type A by means of the agglutinin-inhibition test, using sera produced in rabbits against the PR8 strain of Type A and the Lee strain of Type B influenza virus.

GEORGE F. FORSTER and HOWARD J. SHAUGHNESSY
Illinois Department of Public Health, Division of Laboratories, Chicago

Initiation of Geological Investigations in the Panama Canal Zone

A letter received by me from Viscount Bryce more than 25 years ago seems to possess more than passing interest. A copy follows:

"Aug. 31, 1920
Hindleap, Forest Row 6, Sussex

"I thank you cordially for sending me the Smithsonian Institution volume relating to the geology & paleontology of the Panama Canal, which I shall read with the greatest interest, though the little geological knowledge I learnt long ago from my father has, in the process of years, left little more than an unabated interest in the subject.

"I may mention that when I visited the Canal in 1910 I found that no proper geological examination of the Isthmus was being made, & wrote at once to President Taft, pointing out the importance of improving the opportunities which the excavation of the Canal afforded. He promptly thereupon had a competent geologist sent there to take the matter up. I have forgotten the name, but it was probably Dr. D. F. Macdonald mentioned in your preface.

"I often think of the pleasant times I had in Washington with the scientific groups at the Cosmos Club & wish the Atlantic were not so wide.

"With our kind regards to Mrs. Vaughan & yourself
Very truly yours
[signed] James Bryce"

The volume to which the letter refers is entitled *Contributions to the geology and paleontology of the Canal Zone, Panama, and geologically related areas in Central America and the West Indies* (*U. S. nat. Mus. Bull. 103*, 1919–20. Pp. xviii + 613. Illustrated). American geologists were aware of the excellent opportunity afforded for a study of the geology of the Isthmus of Panama, but were uncertain as to how to establish contact with the Isthmian Canal commissioners. The effect of the letter from Lord Bryce to President Taft was to establish contact between the commissioners and the U. S. Geological Survey. The "competent geologist" mentioned by Lord Bryce was C. Willard Hayes. After the latter's return to Washington Donald F. MacDonald was recommended and appointed Commission Geologist in 1911. In October and November 1911, I spent a full month in the Canal Zone working with Mr. MacDonald, and after my return to Washington organized, as a cooperative enterprise between the Canal Commission, the Smithsonian Institution, and the U. S. Geological Survey, the studies the results of which appeared in the volume above mentioned.

In this connection another investigation of phenomena exhibited by the Canal should be mentioned. Early in 1915, because of the serious landslides along the sides of and in the Canal, the engineers in charge of the project wished help in understanding the causes of the slides. In response to the desire of the engineers President Wilson referred the matter to the president of the National Academy of Sciences, William H. Welch, who appointed a committee of 13 under the chairmanship of C. R. Van Hise to study and report on the problem. The full report, entitled "Report of the Committee of the National Academy of Sciences on Panama Canal slides," was published in 1924 (*Mem. nat. Acad. Sci.*, Vol. 18). This report is a valuable addition to the literature of engineering geology.

Lord Bryce had many friends in this country, which he understood so well and to whose welfare he was so devoted. The role he played in initiating geological investigations in the Panama Canal Zone has not been generally known. It extends the basis of the high esteem in which our fellow citizens hold him.

T. WAYLAND VAUGHAN
U. S. National Museum, Washington, D. C.

On the Term "Normality Factor"

The term "Normality Factor" is occasioned in a few biochemical texts (laboratory manuals). According to one author, "A normality factor is a number which expresses the strength of a solution in terms of its normality. Thus if a solution is 0.2N, it is 0.2 as strong as a normal solution."

In effect, this statement says that there is no difference between the original term, normality, and normality factor (NF). Then why introduce it? The universal terminology and concept of normality is accepted and used in practically every analytical text published.

It is difficult to see either the logic or convenience in the interpolation of such a term. An example of the calculation of NF is as follows: 25 cc. base : 50 cc. acid : x NF acid : 0.010 N (NF) base

$$x = \frac{25 \times 0.010}{50} = 0.005 \text{ NF acid}$$

In the usual interpretation this is simply the normality of the acid.

In using the NF the following typical formula is employed:

$$\frac{\text{cc. acid} \times \text{NF acid} \times \text{mg. eq. of } x \text{ substance} \times 100}{\text{wt. of sample}} = \text{per cent } x \text{ substance}$$

The use of NF here is similar to using normality—which it would have to be, since it is *the same value.*