

it is for that reason that I have paid special attention to the methods of experimental attack which seem to give the most concrete results in this connection. Hesitant as we may be to accept in all its details a theory which asks us to abandon laws upon which we have pinned our faith, this theory, and the quantum theory as well, may be the flashes of genius which reveal incompletely the outlines of the truth toward which we struggle along a dimly lighted path. Fuller knowledge may resolve some of our difficulties and reconcile apparent contradictions. Ptolemy's theory of epicycles would appear wholly irrational to one acquainted with Newton's laws but ignorant of Kepler's conclusions, yet it correctly described the facts as Ptolemy saw them. Some day the Kepler and the Newton of the atom may appear, but their task will not be an easy one. If the astronomer is baffled by the problem of three bodies which he can see, how can we expect to define the exact laws determining the motions of the invisible hosts of electrons and positive charges in an atomic system? How can we hope to correctly picture the mechanism which emits radiations of almost infinite complexity, or account for the additional complications called forth by external forces? We may be almost tempted to accept the pessimistic view expressed by Planck in his Columbia lectures, that nothing in the world entitles us to believe that it will ever be possible to represent completely through physical formulæ the inner structure of the atom. And Kayser has said:

A true theory must assume a complete knowledge of electrical and optical processes, and therefore is an Utopia.

But even if we never reach the goal, who can set a limit to our approach to it? We may never set foot upon the promised land, but some day we may perceive its shadowy outlines dimly from afar.

UNIVERSITY OF CALIFORNIA      E. P. LEWIS

#### WILLIAM RANE LAZENBY

WILLIAM RANE LAZENBY, professor of forestry in Ohio State University, died at Columbus on September 14 of pneumonia. In the passing of Professor Lazenby there is removed from us one who has devoted his life with marked success to the advancement of agriculture and agricultural education.

He was born on a farm at Belona, Yates County, N. Y., December 5, 1850; he entered Cornell University in the fall of 1870, and graduated with his class in 1874. During this period, he not only kept up his studies, but also supported himself by labor, first, on the university farm and campus, and later, in the botanical department. This at times was an extremely difficult thing to do, as the compensation for such labor was small and the time that he could spare for this work was limited. At times he was greatly discouraged; but the steadfastness of purpose, which was a prominent characteristic of his entire career, kept him at his self-imposed task. In spite of the handicap of the necessity of self-support he was so successful in his studies that he won the Ezra Cornell prize in agriculture, and on graduation he was made a member of the teaching staff of the university.

His first appointment was as instructor in horticulture; later he was promoted to an assistant professorship in horticulture, which position he held till he was called to the Ohio State University. As he was the first member of the Cornell faculty whose duties were limited to horticulture, he may be regarded as the founder of the horticultural department of this institution.

He was called to the Ohio State University as professor of botany and horticulture in 1881, which position he held till 1892, when his title was changed to professor of horticulture and forestry; since 1910 his field has been restricted to forestry.

Professor Lazenby had published much on the subjects that he taught. He spent many of his summer vacations in studying horticulture and forestry in Europe. He was a fellow of the American Association for the Advancement of Science, a founder and past president of the Ohio Academy of Science and a life

member of the American Pomological Association and the American Forestry Society. His wife and a daughter, who is a student in Smith College, survive him.

In his undergraduate days at Cornell, Lazenby was a great favorite with his fellow students. His genial good nature, his unselfishness, and his great earnestness won the hearts of those associated with him. Already at that early period in his career, he was devotedly interested in the cause of agriculture, and took a prominent part in the work of the Grange and of agricultural and horticultural societies, and later his influence in these organizations did much to bring their support to the development of the agricultural work at Cornell. He also took a prominent part in the movement that resulted in the establishment of the agricultural experiment station at Geneva, drafting the bill, the passage of which by the New York State Legislature established this station.

While Professor Lazenby found his great interest in life the mastery and development of his special field in science, it was the human side of him that had the strongest hold on his friends and colleagues. He never lost his interest in the struggles of students with limited means and in a quiet way extended aid to many of them. He never lost an opportunity of service to his friends or others in need; sympathy, helpfulness and loyalty were his characteristic qualities as a man and friend; and his loss to all of us who knew and loved him is irreparable.

J. H. COMSTOCK

### SCIENTIFIC EVENTS

#### ANTHROPOLOGICAL ESSAYS IN HONOR OF PROFESSOR W. H. HOLMES

A FIVE-HUNDRED page volume of anthropological essays abounding with pertinent and beautiful illustrations was presented to Mr. William Henry Holmes, head curator of anthropology in the United States National Museum, on the occasion of his seventieth birthday, December 1, 1916. The volume is a tribute by his friends and collaborators in the study of anthropology, forty-four of whom contributed original articles for publication

in the anniversary volume. The book, of which only 200 copies were printed, was edited by Mr. Frederick W. Hodge, ethnologist-in-charge of the Bureau of American Ethnology of the Smithsonian Institution.

The presentation took place at a dinner held at the Lafayette Hotel, at which were present most of those who took part in the preparation of the book, and proved a complete surprise to the guest of honor. Mr. Holmes has been engaged in scientific investigations under the government for forty-five years; first with the government geological surveys, then with the Geological Survey, and finally the Bureau of American Ethnology, and the United States National Museum. In fact, he has been in the scientific service of the government continuously since 1871, with the exception of three years (1894-97) during which time he was curator of anthropology in the Field Museum of Natural History and professor of anthropic geology at the University of Chicago. Besides being a geologist and anthropologist, Mr. Holmes is an artist of note, and has been curator of the National Gallery of Art, a branch of the National Museum, since its establishment several years ago. Incidentally, he has been the representative of the government at seven national and international expositions.

His influence upon the work of his collaborators and assistants has been very marked. The note of appreciation, which prefaces the anniversary volume of anthropological essays, remarks in part:

This volume . . . must not be regarded as merely commemorative of the day on which you achieve the seventieth milestone in your journey of life. It is rather an epitome of the influence you have exerted on others through the passing years, a testimonial of your masterly leadership in both science and art. You are still at the height of your remarkable activity. At no time in your career have you done more noteworthy work in the advancement of knowledge than you are doing now. So with your splendid reserve of force, and with the inspiration derived from the important results of a generation of research in American archeology, we hope and expect you will continue to bestow upon us the influence of that experience for years to come.