SCIENCE

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HENRY BARKER HILL.

HENRY BARKER HILL, professor of chemistry and director of the Chemical Laboratory of Harvard College, died on April 6, 1903, in the fifty-fourth year of his age, after a brief but painful illness. His death makes an irreparable gap in the ranks of American scientific men.

Professor Hill's life was a quiet one—the life of an investigator in a field of scientific rather than of public interest. His delicate health for years and his retiring disposition prevented many of his colleagues from knowing him well; hence his true worth has perhaps not been fully appreciated by those outside the circle of his intimate friends.

The Reverend Thomas Hill, his father, was at one time president of Antioch College, and later, from 1862 to 1868, president of Harvard University. In 1845 Thomas Hill married Miss Anne Foster Bellows, and on April 27, 1849, Henry Barker Hill was born. Having spent his later school days in Cambridge, he entered Harvard College in 1865 at the age of sixteen years. Here his unusual versatility was soon recognized by his early companions, who felt that with so many possibilities the choice of a profession must be difficult. His mathematical ability was rare; he possessed a keen and sympathetic taste for music, and his literary and philological in-

stincts were strong. When the decision was made, however, there was no swerving or faltering in the path. After graduation in 1869, he went to Berlin, where he studied chemistry for a year with A. W. Hofmann. On returning to America, he was made assistant in chemistry in Harvard University, a post which he held for four years. At the age of twenty-five he was promoted to an assistant professorship, and ten years afterwards became full professor. The always increasing administrative duties of the growing department of chemistry were divided on the death of Professor Josiah Parsons Cooke in 1894, and Professor Hill was given the responsibility of the management of the laboratory as director, while Professor Charles Loring Jackson was made chairman of the department. During the nine years of his directorship, Professor Hill, with the utmost ingenuity, remodeled and enlarged an old and unsuitable building with such success as to provide available accommodation for over seven hundred men, and to increase immensely the efficiency of the institution. Administrative work of this kind was undertaken with the conscious sacrifice of some of his dearly cherished scientific ideals, but no murmur of complaint escaped him. The long service of thirty-three years to Harvard University was unremitting; for he never claimed the occasional holiday-year which was his due.

On September 2, 1871, he was married to Miss Ellen Grace Shepard, who with their son, Edward Burlingame Hill, survives him. In recent years their summers have been spent in Dublin, New Hampshire, and bicycle rides thence to Cambridge on laboratory business were not unusual occurrences during the summer months.

The National Academy of Sciences elected Professor Hill to membership as long ago as 1883, and he was also a fellow of the American Academy of Arts and Sciences and a member of the Washington Academy and of the American and German Chemical Societies.

Professor Hill's original scientific work was marked by the quality which preeminently characterized his whole life—absolute sincerity. At the outset, great enthusiasm enabled him soon to overcome the handicap of his somewhat inadequate training, and even his first paper on methyluric acid was an unusually thorough and convincing piece of work. Soon afterwards his fortunate discovery of the rare substance furfurol among the products of the dry distillation of wood, enabled him to begin its investigation; and for twenty years his best thought was given to the derivatives of this substance, especially to pyromucic, mucobromic and mucochloric acids. This series of investigations constitutes a remarkably complete and systematic whole, raising a large group of substances from a position of oblivion to one of commanding importance. Later his discovery of nitromalonic aldehyde led him to a number of interesting syntheses of the benzol ring; and last winter he was engaged in the study of derivatives of pyrazol, another ring-structure.

An acute sense of the responsibility of publication was always in his mind; accordingly his words were carefully weighed, and unusually free from misstatements. Work done by students was always repeated with his own hands before publication—instead of being tested only here and there, after the manner of most chemists. His remarkable lectures on organic chemistry were noticeable for the same admirable completeness; they presented a finely balanced and comprehensive view of the subject. In these lectures he occasionally expressed theoretical views of his own

which never appeared in print. Many of these views have since been generally adopted at the later independent suggestion of others less diffident about publication. An example in point is his opinion concerning the structure of diazo bodies, first conceived by him over twenty years ago, and now conceded to be the most probable hypothesis.

Hill's original work and his lectures were equally conspicuous for thorough knowledge, convincing logic and perfect sincerity. Until the end his highly cultivated and widely varied tastes continued to be sources of refreshment and pleasure to him, while to those of his colleagues who came closest he revealed also keen and appreciative sympathy, self-forgetting generosity, a stanch and devoted friendship, undaunted courage, and above all, single-heartedness in the search for truth.

T. W. R.

THE STATUS OF PUBLIC MUSEUMS IN THE UNITED STATES.

I. THE AUSPICES OF OUR MUSEUMS.

No general discussion of the status of our museums has been attempted, although G. Brown Goode (see 'Annual Report of Smithsonian Institution,' 1897, Vol. II., U. S. National Museum) has presented many phases of the subject in a masterly manner in his papers upon 'The Genesis of the United States National Museum,' 'The Origin of the National Scientific and Educational Institutions of the United States,' 'The Beginnings of American Science,' etc. He also instituted some comparisons between our museums and those of Europe, and in his report upon the condition and progress of the U. S. National Museum, 1892–93, he shows that while for 24 years the South Kensington Museum had spent an annual average of about $47,000 in the purchase of specimens, our National Museum had never spent more than $8,500 annually for this purpose.

It is gratifying to observe that while our National Museum has been enabled to spend annually somewhat more for specimens than during the period referred to by Goode, yet in 1901 the American Museum of Natural History expended more than twice as much as the National Museum for this purpose.

The whole question of museum status has become an important one, as we are in all probability upon the eve of a museum movement which may prove comparable with the great increase in efficiency and number of our public and school libraries, which during the five years from 1895 to 1900 have increased from 4,026 to 5,383, and the number of volumes from 33,051,872 to 44,591,851, or almost 35 per cent.

No corresponding increase has taken place in the number of our public museums or in the magnitude of their collections; and, indeed, the subject has attracted so little public interest that no published lists of our museums are at present available, although a very valuable list of the natural history museums of the United States and Canada and an account of their collections are being prepared under the direction of Professor Frederick J. H. Merrill, of the New York State Museum, and will soon be published.

Professor Merrill has been so kind as to allow me to inspect the proofsheets of this interesting work, and I am also indebted to the Smithsonian Institution for a partial list of the museums of the United States. It appears that within the United States there are at least 252 institutions which contain collections of objects of natural history. Of the total number, 176 or 70 per cent. are school, college or university museums; 31 are the museums of learned