

SCIENCE:

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Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

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GEORGE HAMMELL COOK.¹

"YET once more, O ye laurels, and once more
Ye myrtles brown, with ivy never sere,
I come to pluck your berries harsh and crude,
And with forced fingers rude
Shatter your leaves before the mellowing year.
Bitter constraint and sad occasion dear
Compel me to disturb your season due."

ONE by one the great men depart. As they pass from the sphere of personal association through the portal of the grave into the world of immortal influence, their deeds and honors are recounted by those who remain.

When the last entry has been made, the book is opened, the account is rendered. Blessed is he whose good deeds more than balance his emoluments, whose services to mankind more than equal the honors paid him by mankind, for "it is more blessed to give than to receive." Thrice blessed is the man whose life and services we commemorate to-day.

The generation now at the zenith of life succeeds a generation whose zenith was clouded by war. As the great men of that day pass out through the sunset of life, their battle-deeds are told. It is thus that the mortuary ceremonies of this generation echo the clangor of charging squadrons, the shrieking rattle of battle-lines, and the roar of batteries.

Sequestered from the pomp of parade, from the roar of funeral gun, from the battle cemetery that hides under marble columns

¹ Address of Major J. W. Powell at the funeral of Dr. G. H. Cook, late State Geologist of New Jersey.

the victims of battle strife, here in the peaceful halls of learning we assemble to commemorate the life of a man whose ways were "paths of peace," whose chariot of progress through the world bore no scythe of destruction, whose life was wholly beneficent, whose youth was devoted to learning, whose early manhood was devoted to instruction, whose prime of life was devoted to research, and whose old age was devoted to the organization and development of institutions for the increase and diffusion of knowledge.

It falls not to my task to characterize the student life of George Hammell Cook. That his opportunities for training were wisely used is abundantly demonstrated by the monument of success which he unconsciously reared for himself in the years of his public activity. It is not in my province to speak of his professorial life. The scholars and public men who were guided into a higher intellectual life constitute a living monument to his fidelity and genius as an instructor.

It was as a man engaged in research that I first knew Professor Cook, and learned to honor his untiring industry, his deep insight, and his intellectual integrity. The catalogue of his contributions to science is long—too long to be recounted here, for it constitutes the annals of a long life. Only a few examples can be used to illustrate the wealth of his accomplishments,—in chemistry, geology, and geography.

In 1854 Dr. Cook became an assistant on the Geological Survey of New Jersey. This was his induction into scientific work. For three years the field of his research was in the southern part of the State, in the marl-beds and amid the potter's clay. Up to that time little attention had been given to these sources of wealth, and fields of industrial operations.

While in this field of labor, he discovered that a thorough geological survey must be based upon geography, and he constructed a topographic map expressly for the representation of geologic structure. His stratigraphic determinations were based largely upon instrumental measurements and carefully drawn plans and profiles of the land surveys. Thus was inaugurated in America a system of geological surveying which has gradually obtained ground until it is practically universal. The anatomy of the earth is exhibited in its topographic forms. Plains, valleys, terraces, hills, and mountains are full of meaning to the geologist, for in them is revealed the deep-seated structure of the earth and the history of that struggle between the great geologic powers which is forever in progress, and from the throes of which the continents are born.

The theatre of these early operations was near the coast, where the tides of the Atlantic ceaselessly surge to devour the land. Here his trained eye observed phenomena that led to a long system of observation and investigation, by which he ultimately demonstrated that the margin of the coastal plain of the Jersey shore is slowly subsiding, and that the sea is steadily enlarging its dominion. This work, as it has progressed through the years ending in his death, constitutes an important contribution to the facts and philosophy of the science of geology which he cultivated.

In 1864 Dr. Cook was appointed State geologist, and held the position until his death. His first task was found in preparing an elaborate exposition of the mineral resources of the State, which had been brought to light by earlier surveys; and he added to these a series of special investigations, such as were required for the symmetric treatment of the subject. This exposition was completed and published in 1868 in a large octavo volume accompanied by a portfolio of maps. He thus at the beginning cleared the field, systematized the existing knowledge, and developed a comprehensive plan for the researches which he carried on until the day of his death. To him geology was not wholly a speculative science. His conception of the duties imposed on him by being intrusted with public funds urged him to administer his trust in such a manner that the welfare of the State might be increased thereby. He did not neglect the great philosophic problems of his science, for he directed the investigations of the survey into structural geology, paleontology, chemistry, and geography; but he held over these researches a constant corrective by making them responsible for exact determinations of industrial