

his previous experience. It is one constant panorama of wonderful scenes, with land nearly always in sight, often on both sides, and with the water ordinarily as calm as the surface of a small inland lake. The fact that all who go wish to go again in the best evidence that can be offered of the great attractions offered by Greenland to the geologist and naturalist. I feel that this statement is warranted because it is so greatly at variance with the common conception of Greenland and the southern Arctic.

RALPH S. TARR.

CORNELL UNIVERSITY.

ALBERT NELSON PRENTISS.

PROF. ALBERT NELSON PRENTISS, who for twenty-eight years has occupied the chair of botany in Cornell University, died at his home on the University Campus, Friday, August 15, 1896. He had been in failing health for several years, and the readers of SCIENCE will recollect that last February severe illness induced him to ask to be retired from active labor in the department, and the Board of Trustees elected him professor emeritus.

Prof. Prentiss was born May 22, 1836, at Cazenovia, Madison County, N. Y. He was a member of the first graduating class of the Michigan Agricultural College, at Lansing, in 1861, and the entire class of seven young men immediately enlisted in the army at the outbreak of the Civil War. He was enlisted in the Signal Service Corps at Battle Creek, Mich., and assigned to special signal service duty in the interior of Missouri. His connection with the army was of short duration, owing to a reorganization on the retirement of the commanding general. In 1862-63 he was associate principal of the Kalamazoo, Mich., high school, and in 1863-64 was instructor in botany and horticulture at his *alma mater* the Michigan Agricultural College, receiving the degree of M. S. in 1864. He was

promoted to the professorship of botany and horticulture in 1865, and held this place until called to the professorship of botany, arboriculture and horticulture in Cornell University, at the opening of the University, in the autumn of 1868. He entered upon his work in this new field with enthusiasm and planted the first autumn seeds of a number of species of trees for a nursery to provide trees for beautifying the grounds. Many of these trees were transplanted in various parts of the campus, but the rapid growth of the University has called for their displacement to provide room for buildings, so that now but three pine trees remain of this original nursery, which are of the same age as the University.

Prof. Prentiss' work has been given largely to teaching and to the supervision of the large grounds of the University, and there are not many published papers of his. In 1871 he wrote an essay on the 'mode of the natural distribution of plants over the surface of the earth,' which won the first Walker prize offered by the Boston Society of Natural History, and was published in pamphlet form. Later, at the request of Prof. B. E. Fernow, Chief of the Division of Forestry, U. S. Department of Agriculture, he prepared an extended monograph of the hemlock (*Tsuga canadensis*), that has not yet been published.

In 1872 he studied for six months in the Royal Botanic Garden at Kew, London, and in the Jardin des Plantes, Paris.

Prof. Prentiss was one of the members of the 'Cornell Exploring Expedition,' as it usually is called, which was organized by Prof. C. F. Hartt, the then professor of geology in Cornell. This expedition was made possible largely by the generous gift of funds by the Hon. Edwin Barber Morgan, of Aurora, N. Y., and is known in University history as the 'Morgan Expedition.' The party sailed from New York

the latter part of June, 1870, explored the valley of the Amazon for a distance of about 400 miles above Pará, as well as the rivers Chingu and Tapazos, two of the principal tributaries of the Amazon. Prof. Prentiss thus had an opportunity of studying the tropical flora, and of making collections for the department. The party returned early in January, 1871. Among the large number of students who have received instruction from him, many have become botanists or teachers of botany, and a noteworthy list of names of these persons might be presented, several of whom occupy some of the most prominent botanical positions in America. In his lectures he was deliberate, clear and concise in his statement, and an easy and fluent speaker. His dignified bearing led many at first to regard him as unsympathetic, but those who came to know him well regarded him as a most delightful companion.

His keen interest in the work of the individual student, and his well chosen words of approval and encouragement kindled enthusiasm among his pupils, and stimulated them to renewed effort. The same gentle and elevating influence, with his cultivated and refined taste, exerted upon his pupils, also was felt in his home and in his social life, and it is to be regretted that the lack of a strong constitution and reserve power, coupled with failing health for a number of years, prevented the production of work and publications which otherwise might have been expected of a man who possessed such culture and natural gifts.

GEO. F. ATKINSON.

CORNELL UNIVERSITY.

CURRENT NOTES ON PHYSIOGRAPHY.

WATERWAYS OF ENGLISH LAKELAND.

UNDER the above title J. E. Marr discusses the origin of the river courses in the lake district of northwestern England (London Geogr. Journ., vii., 1896, 602-621).

The chief streams are thought to have been superposed on the deformed paleozoic rocks of the region from an unconformable cover of the younger strata; Marr advocating the former occurrence here of Cretaceous or even of Eocene beds. Subordinate streams are subsequent, being developed along weak strata or along faulted belts. The lake basins, large and small, are not explained by glacial erosion, but by drift barriers; fuller evidence on this point being promised. The gradual retreat of the Pennine escarpment, and the beheading of the Tees headwaters by the steep 'gills' that descend to the Vale of Eden, are incidentally described.

In certain paragraphs there does not appear to be sufficient appreciation of the long perspective of events involved in the history of so old a region as Lakeland. The upper part of river Lune, flowing from carboniferous rocks to the higher-standing paleozoic beds of Howgill fells, is given as an example of antecedent drainage. Several branches of the Lune, that flow from the thrown to the heaved side of the great Dent fault, are likewise explained as antecedent. Here the possibility that many cycles of erosion elapsed since the ancient rocks of the region were deformed and faulted is not clearly set forth. Yet, during these cycles, it is quite possible that the land forms initiated by the ancient deformation, and the river systems antecedent to or consequent upon these land forms, may have suffered extensive alteration; the lands may have been more than once uplifted, dissected and peneplained; they may have been drowned, buried, uplifted and stripped; and the rivers may have lost their initial courses by spontaneous adjustments to internal structures, by superposition, or by displacement through warping of the land surface. The problem is not simple enough to be decided merely by the direction of a stream with respect to the heaved side of a fault.