H. J. S. Smith." He was at his appreciative and genial best in general addresses. His careful lecture, delivered in the ante-chapel of Trinity in 1887, in commemoration of the bi-centenary of the publication of Newton's "Principia," was a wonderful tribute to a great spirit. His address as the president of the London Mathematical Society in 1890 is a valuable monograph on the long history of the Senate-House Examination, more commonly called the Mathematical Tripos, since 1824. The last of his addresses, in 1926, already quoted, may continue to stand as the best authentic history of the early stages of the London Mathematical Society.

In person Glaisher was very tall, slim all his days, with an upright figure which even his long illness could only partially bend. His smile of appreciation was delightful and infectious; when appreciation waxed into admiration, his attractive eyes could glow with sympathetic delight. He was singularly fluent in speech, though he never aimed at eloquence; yet dignified passages abound in his formal addresses. He was a don, not of the old-fashioned type, scarcely indeed of any recognised type; there was no shred of pomposity; there was a persistent note of good-nature, not devoid of the occasional touch of whimsical mischief, with which he sometimes would quiz too seriously solemn persons. The deeper notes of human feeling were not wanting when, as occurred to him during his tutorship, he had to help others to face issues of life and death.

In mathematical science Glaisher now appears to have been a man mainly of stimulating influence upon others, and an inspiring teacher, rather than a pioneer whose manifold contributions to his science could be proclaimed as notable and memorable. The earlier years of his teaching at Cambridge were a time of transition in the mathematical thought and activity of the University. Cayley was almost a voice crying in the wilderness; and Glaisher himself described Cambridge pure mathematicians of those days as generals without armies. When he ceased teaching, Cambridge pure mathematics had gone far beyond his active vision, mainly under men whom, as his students, he had encouraged and stimulated at the beginning. His influence was rather that of the inspired preacher and herald. His voice was that of a great teacher, yet not in any way similar to the great Cambridge coaches of the past; for throughout his life he was ever a contributor to the knowledge of his science as well as a guide through ranges of knowledge outside the conventional examinational learning. He was a distinct personality in his day; a stimulus to other men, especially young men who came within the sphere of his influence; and he has left a name, high among the noted names of his own generation, in two widely different fields of constructive thought and human activity. A. R. F.

WE regret to announce the following deaths:

Sir William Boyd Dawkins, F.R.S., honorary professor of geology and palæontology in the Victoria University of Manchester, the doyen of students of prehistoric man, on Jan. 15, aged ninety-one years.

Dr. H. J. H. Fenton, F.R.S., honorary fellow of Christ's College, and formerly lecturer in chemistry in the University of Cambridge, on Jan. 13, aged seventy-four years.

Prof. Wm. North Rice, emeritus professor of geology in Wesleyan University, president in 1891 of the American Society of Naturalists and a vice-president in 1905 of the American Association for the Advancement of Science, on Nov. 13, aged eighty-three years.

News and Views.

THE paper by Prof. A. S. Eddington on the charge of an electron which appears in the January issue of the *Proceedings of the Royal Society* (vol. A, 122, p. 358), and was read and discussed at the meeting of the Society on Jan. 17, is based upon the fundamental principles of the theory of relativity and of the new mechanics. The so-called exclusion principle of the statistics of Fermi and Dirac prescribes an interaction of two electrons; this interaction is identified with their electric repulsion, and the details of the latter phenomenon can thus be predicted on essentially statistical grounds. The problem is taken to be one of a 'space' of sixteen dimensions, and it follows that the ratio $hc/2\pi e^2$ (where h, c, and e have their usual significance of Planck's constant, the velocity of light and the electronic charge respectively) should be simply the number of symmetrical terms in an array of sixteen rows and sixteen columns, which is 136. The experimental value of the ratio is 137·1, but Prof. Eddington believes that the discrepancy, although some three times the reputed probable error of experiment, does not originate with the theory. Prof. Eddington's conception of the meaning of the factor $2\pi e^2/hc$ can be best given in his own words. It "expresses a kind of property attributed to every pair of points in space; it turns space from a mathematical conception into a possible site of physical phenomena by associating with a pair of points some degree of probability that they may be the scene of this interaction. There is no room for elaborate integrations or for differential equations in the theory of such a fundamental factor." Again: "Modern theory has virtually abolished all structure of an electron," and with this, the expectation "that the value of e would depend on the singular solution of some differential equation expressing the transition from charge to field."

THE issue of the *Proceedings of the Royal Society* for Dec. 3 (Series A, vol. 121, No. A788) is especially interesting to students of quantum-mechanics; it contains no less than five papers which are excellent examples of the process of consolidation going on at both ends of the new theory. Any new theory, naturally enough, especially one developed at the rate of the theory of quantum-mechanics, is liable to be presented at first with a lack of complete-