Sir Joseph Banks, Bart.

PRESIDENT OF THE ROYAL SOCIETY FROM 1778 UNTIL 1820.

THE forthcoming anniversary meeting of the Royal Society is the hundred and fiftieth anniversary of the election of Joseph Banks, the distinguished naturalist and companion of Captain Cook in his first voyage of discovery, as president of the Society. Banks was elected a fellow in 1766, chosen president in 1778, and served in that office for a period of forty-one years. Those who comprised the pageant of science during his presidency, choosing names in a catholic sense and in order of years, included Count Rumford, Cavallo, Desaguliers, William Herschel (who communicated to Banks the name Georgium Sidus for the new planet), James Watt, Wollaston, Lavoisier, Volta, Davy, Cuvier.

Beyond a wide knowledge of botany and of races of people, fully appreciated in his case, it is difficult to gauge accurately—and no attempt is made here—what Banks's precise hold was on the men of his time that he should obtain practically undisputed pre-eminence in the official world of science. Certainly he was rich, extremely hospitable, a sound friend, and devoid of petty excesses in language. He had the grand manner, the Georgian patriotic instinct, the love of Imperial expansion. He lived to witness the steps that were taken for the colonisation of Australia and New Zealand.

Joseph Banks was a Londoner, born on Feb. 2, 1743 (O.S.), in Argyle Street, hard by what is now Oxford Circus. His family was of Yorkshire extraction. Sent to Harrow at an early age, at thirteen he was removed to Eton, on leaving there becoming a gentleman commoner at Christ Church, Oxford. Here it was that his love of natural history broadened and shaped his future career. Banks was created a baronet in 1781, a Knight of the Bath in 1785, and a Privy Councillor in 1797. He died without lineal issue, at Spring Grove, Isleworth, on June 19, 1820, his wife surviving him.

In the year of his election into the Royal Society (1766), Banks decided to visit Newfoundland and Labrador in quest of botanical specimens, and accepted an offer to accompany Lieut. Phipps, commanding H.M.S. *Niger*, a boat on government service. It was his first venture, his baptism of exploration, and those earlier studies at Oxford in botany and general natural history were now to undergo the test of enlarged opportunities on virgin territory. He kept a journal (ending Nov. 17, 1776)—faithfully treasured at Adelaide, and he collected many plants. But a larger undertaking, which through its magnitude and momentous scope appealed to Banks, was at hand, namely, Cook's projected voyage to the Pacific in the *Endeavour*. Approach was made to the council of the Royal Society requesting a place in the complement. It is recorded that the council "very earnestly" asked the Lords of the Admiralty that in regard to Mr. Banks's great personal merit, and for the advancement of useful knowledge, he also, together with his suite, and with their baggage, might be received on board of the ship in command of Captain Cook. Banks was then twenty-five years of age, and he was the possessor of an ample fortune. The journal which he compiled during the voyage, or rather diary, is a classic. Sir Joseph Hooker, its latter-day editor, refers in eulogistic terms to Banks's untiring activity, whether in observing or collecting animals and plants, investigating and recording native customs and languages, bartering for necessaries with the inhabitants, or preventing the pillaging to which the ship was frequently subjected. Surely a man of vision in advance of his years and period, and a worthy pioneer companion for Cook in strange seas and lands.

There was an incident at Otahite relating to a stolen quadrant. Says Banks (April 2, 1769), "This morning the astronomical quadrant which had been brought ashore yesterday, was missed." To recover this Banks and his colleagues journeyed four miles from their base, only to learn that yet another three miles must be traversed to secure the instrument. But success came. "We packed up all," he writes, "in grass, and proceeded homewards. After walking about two miles we met Captain Cook with a party of marines coming after us."

On the completion of the Pacific voyage, Banks received from his *alma mater*, the University of Oxford, the D.C.L. degree. Soon his portrait was painted by Sir Joshua Reynolds. The metropolis welcomed him with affectionate fervour. So ardent a collector and naturalist could not, however, but seek fresh extension of his studies. In 1772 plans for Cook's second voyage of circumnavigation were going forward, and it was the wish of Banks to accompany him. In regard to the resultant failure, Sir John Barrow, in retrospect, was at no pains to conceal his views. "Such a system," he wrote, "was adopted by the Navy Board to thwart every step of his [Banks] proceeding, whereby his patience was worn out, and his indignation so far excited as to cause him, though reluctantly, to abandon this enterprise altogether." Instead, Banks directed his energies towards organising and equipping a scientific expedition to Iceland. He sailed on July 12, 1772, and much valuable material accrued through his efforts and those of his coadjutors.

Most men of science know that numbers of Banksian letters and records were dispersed long ago through the medium of auction sales. In the case of Banks's Iceland journal, fortunately, through certain favourable circumstances arising after his death, a copy was made, and it is pleasing to direct attention to the issue, this year, by the Cornell University Library, of the work "Sir Joseph Banks and Iceland." The author and

annotator, Dr. Halldór Hermannsson, prints the following significant paragraph: "This manuscript, with other of Banks's papers, went to the family of his wife, and Lord Brabourne, a relative [great nephew] of hers, finally sold them at a public auction in 1886, and its whereabouts (*i.e.* original MS.) is unknown, if it is still in existence." It was Lot 21 in the sale.

After his Iceland tour, Banks established himself at a house in Soho Square, and thenceforward devoted himself to the advancement of science in fulfilment of personal hopes and aspirations. On Mar. 16, 1820, Banks occupied the presidential chair at the Royal Society for the last time; for reasons of health he very shortly intimated his wish to resign his charge. Upon solicitation he withdrew his resignation; but in June following he died, and, like Newton, whilst in office. The Royal Society possesses a portrait of Banks, painted by Thomas Phillips, R.A.

Obituary.

Sir Hugh Anderson, F.R.S.

SIR HUGH ANDERSON, who died on Nov. 2, was one of the most influential and the best-loved men in Cambridge. Modest to a fault and ready to see merit in all but himself, he was nevertheless a far-sighted and resolute administrator, and the driving force behind most of the recent changes in the University. But a man of science who is modest about his own work and is withal a capable man of affairs must be drawn almost inevitably to the administrative side. Anderson's research work came to an end in 1905, when the calls on his time became more and more urgent. For many years he hoped to return to the laboratory to work at his unfinished problems 'when he had a moment to spare,' but he never had that moment. In the end he used to say that he was out of it for good, and that all he could do was to encourage the younger men. But the truth is that he was never out of it, for everyone came to him for sympathy and advice, and his wise guidance has had an indirect effect on the scientific work of the University which it would be hard to over-estimate.

Anderson's own research work was mostly carried out in collaboration with Prof. Langley, and dealt with the then obscure problem of the nerve supply to the viscera. To Langley must belong the credit of producing the complete systematic account of the autonomic nervous system as we know it to-day, but the papers which he published with Anderson mark the most important phase of the whole work. The arrangement of the sympathetic system had been made fairly clear by Gaskell's morphological work and Langley's brilliant application of the nicotine method, but there remained the more difficult problem of the cranial and sacral autonomic nerves, and in the course of twelve years—from 1892 to 1904—Langley and Anderson worked together, tracing out the innervation of the iris and of the pelvic viscera and arriving finally at a complete account of the parasympathetic system. In their final papers they rounded off their work by experiments on the union of different kinds of nerve fibres.

In 1905, Anderson published two papers of his own, analysing the effect of drugs on the iris and clearing up various points which remained obscure in its nervous control, and then administrative work claimed him. But although his research work extended only from 1892 to 1905, it was throughout of a very high order; it produced results of the first importance, and it left him with a vivid interest in the physiology of the nervous system, and a power of illuminating suggestion and criticism which never seemed out-of-date. It left him, too, with an insight into the difficulties of the scientific worker which made his advice so much sought after by colleagues of all generations, and in the end we may hope that a partial realisation of the encouragement and help he gave to others may have consoled him a little for his own unfinished researches.

Anderson's work for the Royal Commission on Oxford and Cambridge, for the medical and biological schools, and as Master of Caius, make an impressive record of service to learning; but no record can do full justice to the vivid and friendly personality of the small, active figure whose loss means so much to his University.

We regret to announce the following deaths:

Dr. H. M. Benedict, professor of botany in the University of Cincinnati, and a former president of the Ohio Academy of Science, who carried out work on senility in plants, on Oct. 17, aged fifty-four years.

Mr. Douglas J. P. Berridge, for several years secretary and recorder of the Educational Science Section of the British Association, and for thirty-four years science master at Malvern College, on Nov. 11, at fifty-nine years of age.

Prof. C. O. Esterly, professor of zoology at the Occidental College, Los Angeles, and zoologist at the Scripps Institution of Oceanography, California, a distinguished worker on copepods who was president of the American Microscopical Society in 1925, on Aug. 10, aged forty-nine years.

Dr. Josef Hepperger, former professor of astronomy in the University of Vienna and Director of the Observatory, on Sept. 13, aged seventy-three years.

Mr. Alfred Smetham, a past president of the Society of Public Analysts and an original member of the Society of Industrial Chemistry, who had much experience of the agricultural side of chemistry, on Oct. 11, aged seventy-one years.

Sir Nestor Tirard, emeritus professor of medicine at King's College, London, and senior editor of the 1914 edition of the "British Pharmacopœia," on Nov. 10, aged seventy-five years.

Mr. Edmund White, president from 1913 until 1918 of the Pharmaceutical Society, who was intimately associated with the 1911 and 1923 editions of the British Pharmaceutical Codex, on Nov. 5, aged sixty-two years.