

series of papers on batholiths was a prominent feature of the meeting, the contributors being S. J. Schofield, F. A. Kerr, H. C. Gunning, Prof. J. S. De Lury, and J. F. Wright. A new theory of the source of the siliceous solutions from which asbestos is produced was put forward by H. C. Cooke in a paper on their silica content. G. A. Young reviewed fifty years of geological investigation of the Canadian Shield, stressing the changes which have taken place and may yet take place in the fundamental ideas regarding this branch of geology. The president-elect of the section is Prof. E. L. Bruce.

In Section 5 (Biological Sciences) ninety-six papers were read, part of the time in divided session.

In his presidential address, Prof. J. B. Collip reviewed the work carried out under his direction on the oestrogenic substances and the anterior pituitary-like substance of the human placenta. Various aspects of this work were later discussed in detail by some of his collaborators. The interrelation of calcium metabolism with the parathyroid glands and with irradiated ergosterol was the subject of a series of papers by other members of the same department and also by Prof. N. B. Taylor. Prof. C. H. Best discussed the possibility of preventing fatty degeneration of the liver in diabetic animals by administration of choline, and presented a series of papers by Dr. D. A. Scott on the chemistry of insulin. Prof. J. G. FitzGerald read papers from his laboratory in the field of immunology. Important papers were also read by Prof. S. E. Whittall on the causes of exophthalmos, and by Prof. B. P. Babkin on the liberation of a hormone from the nerve-endings of the chorda tympani.

The life of reindeer and other mammals in relation to segregation, sexual isolation, and evolution of species was discussed by Prof. Seymour Hadwen. Prof. A. Willey described a new species, *Nebaliella Caboti*, the first of the genus recorded from the North Atlantic, and showed that another form, *Epineballia pugettensis*, is distinguished generically from *Nebalia* by the structure of the male. Prof. E. M. Walker presented several papers, amongst which may be mentioned one by F. P. Ide on the effect of the temperature gradient of a stream upon the insect fauna, and another by himself on prognathism and hypognathism in insects. One food chain of the sea, from diatoms to fish through cope-

pods, was demonstrated in a paper by C. W. Lowe, presented by Prof. A. H. R. Buller.

The botanical papers were varied and interesting. Those dealing with morphology, including a correlation of resin cyst production in hemlock, in response to wounding with seasonal growth; an account of the origin of rays in Gymnosperms in relation to taxonomy (both papers by M. W. Bannans); and an account of the organisation of the young sporophyte of *Isoetes*, based on anatomy, in comparison with that of other Pteridophytes (by W. K. W. Baldwin) were presented by Prof. R. B. Thomson. Prof. Marie Victorin recorded several examples of the transformation of the concrescent carpels of *Aralia nudicaulis* into five simple leaves or leaflets. Dealing with fungology were several papers from Prof. Thomson's laboratory on the subject of rusts and other fungi, and a very interesting account of hyphal fusions and their significance by Prof. A. H. R. Buller. Plant physiology included some important papers by Prof. G. H. Duff and Dorothy Forward, on respiratory metabolism and sugar changes in wheat leaves kept in the dark, and on the influence of this on their reaction to rust infection. Prof. F. E. Lloyd criticised M. Kruck's revival of the theory that the door of the trap of *Utricularia* is an irritable mechanism. An intensive study of the water balance of certain Canadian trees throughout the year and its bearing on problems of tree physiology was given in a paper by R. D. Gibbs. Dealing with cytology and genetics were papers by Prof. C. L. Huskins, adducing evidence of the homology between somatic mitosis and germinal meiosis, which indicated that the latter is brought about through retardation of the splitting of the chromonemata during the last premeiotic division. Taxonomy and ecology were represented in a series of papers by Prof. Marie Victorin and his associates. Of especial interest was the account of ecological modifications in the riparian flora of the St. Lawrence River, due to exceptional low water levels, and of the spread and adaptability (for example, to growth in deep water) of the introduced species *Butomus umbellatus*. Prof. J. G. FitzGerald was elected president of the Section.

The president of the Society for the ensuing year is Prof. Francis E. Lloyd, Macdonald professor of botany in McGill University.

Obituary

PROF. G. BALDWIN BROWN

WE regret to record the death of Emeritus Prof. Gerard Baldwin Brown, which took place at Edinburgh on July 12, at the age of eighty-two years. Born in London on Oct. 31, 1849, he was educated at Uppingham and Oriel College, Oxford—of which later he became a fellow—obtaining a second class in Honour Moderations and a first class in Literæ Humaniores in 1873. His success in winning the Chancellor's prize for an essay on "The Short Period during which Art has remained at its Zenith in Different Countries" was an early indication of

the bent of his mind, a bent which was further strengthened by his election as a fellow of Brasenose College, where he was brought into touch with Pater. He left Oxford to take up painting in London, and was afterwards appointed the first Watson-Gordon professor of fine art in the University of Edinburgh, at the early age of thirty-one. This chair he held for fifty years, retiring at the end of the academic year 1930, a period equalled only twice in the annals of the University.

Baldwin Brown's early essay in the history of art while he was still at Oxford had indicated that his

approach to art was archæological and historical rather than purely æsthetic; and interest in that line of inquiry grew as his life-work developed. His earliest book was "From Schola to Cathedral", a study of early Christian architecture. His outstanding and most enduring work is "The Arts in Early England", a monumental effort and an established authority, in five completed volumes and part of a sixth, published at intervals between 1903 and 1930, which displays a wide knowledge of the facts and indefatigable industry. In it, as in a smaller but comparable work, "The Arts and Crafts of our Teutonic Forefathers", he stressed—unduly, many archæologists would now say—the contribution of the Teutonic races in the artistic origins of Britain and North and Central Europe generally. The knowledge of æsthetic principles and theory which Baldwin Brown brought to bear on the archæological problem in his larger work was also used to advantage when dealing with palæolithic art in "The Art of the Cave Dweller" (1928), his Munro Lecture, a book for the preparation of which he had visited the caves of France and Spain, though then nearly eighty years of age, and in which the large number of illustrations, many of them of the less known examples of cave art, was used with striking effect in demonstrating with

precision, from what to most archæologists was a new point of view, the æsthetic qualities of palæolithic painting and engraving, as well as the intentions and achievement of the artist.

In addition to the books already mentioned, Baldwin Brown was the author of "Anglo-Saxon Architecture", "The Life of Anglo-Saxon England in relation to the Arts", "The Care of Ancient Monuments", and a number of books on individual painters or matters of artistic technique. He was a fellow of the British Academy, of the Finnish Archæological Society, of the Yorkshire Philosophical Society, an associate of the Royal Institute of British Architects, and hon. LL.D. and D.Litt. of the University of Edinburgh.

WE regret to announce the following deaths:

Prof. Fran Jesenko, professor of botany in the University of Ljubljana, Yugoslavia, known for his work on the genetics of wheat and rye, on July 14, aged fifty-seven years.

Prof. Graham Lusk, For.Mem.R.S., professor of physiology in Cornell Medical College, New York, a distinguished worker on the physiology of nutrition, on July 18, aged sixty-six years.

News and Views

A Century of Medicine

THE RIGHT HON. LORD DAWSON OF PENN delivered his presidential address at the centenary meeting of the British Medical Association on July 26, taking as his subject "A Hundred Years and After". Lord Dawson traced the art of healing from the Egyptian Imhôtep (*circa* 3000 B.C.), through the well-known Greek era, to the Christian era, where at the beginning there was a retrogression, Christianity at that time delaying rather than promoting medical progress. The greater part of Lord Dawson's address, however, was devoted to the directions along which medical knowledge has grown during the last hundred years. The Reform Bill of 1832 forced masses of the population to dwell in towns, with the result that the prevailing conditions, due to lack of knowledge of public health and sanitation, caused misery, ill-health, and discontent. During the year of the Association's birth, there was a cholera epidemic raging over England and Wales, during which the number of deaths exceeded 50,000. At that time the idea prevailed that epidemic diseases were visitations beyond our ken and control. Even then, however, great minds were working: Virchow in cellular pathology, Bernard in physiology, Bright in medicine, and Chadwick in sanitation.

Medicine and the Basic Sciences

THE dawn of the new era in medicine occurred, however, in 1857, with Pasteur's discoveries. These were soon followed by those of Lister, and thus began a quick succession of discoveries by men well known in the history of science and medicine. To-day there is a stronger link with medicine and the pure sciences.

Physics and chemistry, with physiology, have taken pride of place in their services to medical knowledge. Radiology has the discoveries of Röntgen and others as its basis. Chemistry has afforded incalculable aid to therapeutics. The value of the scientific investigations of the seven known vitamins to medicine need scarcely be emphasised. Hormones and virus diseases are now of great importance to the study of physiology and pathology. The kinship between medicine and education was also emphasised by Lord Dawson. Still closer co-operation is required in the quest for knowledge. The Medical Research Council is doing a great service in supporting and directing efforts, wherever they come from, and it maintains contact between workers and between the institutions to which they belong. "There is, however, need for further co-ordination among bodies which represent varied aspects of medical knowledge such as the basic sciences, medicine, surgery, obstetrics, education, and administration."

Progress of Rational Medicine

SIR CHARLES HASTINGS, founder of the British Medical Association, was a native of Worcester, and part of the centenary meetings of the Association took the form of a visit to Worcester on July 24 and a commemorative service in the Cathedral, with a sermon by Dr. E. W. Barnes, Bishop of Birmingham. Dr. Barnes's text was "Honour a physician with the honour due unto him" (*Ecclesiasticus*, xxxviii. 1). Modern science and medicine began with the publication by Copernicus of his heliocentric astronomy and the production by Vesalius of his work on the anatomy of the human body. Nearly four centuries have