

dynamically, not statically. We might perhaps qualify our statement and say "almost at its best." It would have been better, though impracticable, to show several of the films again. Even when one knew what to look for, it was quite impossible to follow all the details of what was done. Further, it was obvious that while for exhibiting processes the film is the superior, yet for still life and for analysis the slide has still the advantage.

The other paper was by Mr. C. E. P. Brooks and was entitled "The Climatic History of the Fjord Countries." Climatology is still in its infancy, and this is one of the few papers which deal with climatic, as distinct from meteorological, problems without becoming unintelligible amid a maze of statistics. Mr. Brooks traced out the succession of climates during and since the Ice Age, if indeed we are out of the Ice Age. He suggested that the Daun stadium should be dated round about 1800 B.C. rather than 5000 B.C., and estimated the temperature of the Norwegian coast at 5000 B.C. to have been  $4^{\circ}$  higher than at present. His most striking suggestion related to the causes of these climatic changes. He associated them with variations in the ice conditions in the Arctic Ocean. Analysis of these conditions by Kerner Marilaun and himself has shown that the Arctic floating ice-cap must either have its present extent or the whole ocean must be free of ice, no intermediate stage being stable. He related the voyages of the Norsemen, who in their voyages to the south of Greenland mention storms but never ice, and the great Asiatic migrations, to an open period in which the Arctic was unglaciated, and concluded, "In the twelfth century the glacial stage recurred and has apparently persisted to the present day." So we are still in the Ice Age!

### Periodicals in Canadian Libraries.<sup>1</sup>

THE need for co-operative library catalogues of scientific periodicals has long been felt in many countries, and various projects have been undertaken to supply the deficiency. The work before us is an attempt to provide for those specially interested in scientific periodicals, and consists of a list of such material available in Canadian libraries, together with bibliographical information. Journals are arranged under their latest form of title, and publications of academies under the name of the society or institution. In our opinion, this method of listing the publications of academies does not facilitate their ready identification. Under the words "Kaiserlich" and "Königlich" there are quite a number of entries, although events of recent years have caused these adjectives to be dropped or replaced. As an example, the *Königlich-Preussische Akademie der Wissenschaften* is now known as the *Preussische Akademie*, though this fact cannot be ascertained from the present work. Had publications of this character been listed under the first word of their title—in this case *Sitzungsberichte*—consultation would have been simplified.

It is to be regretted that a number of Canadian libraries, whilst those responsible realised the importance of the work, were unable to include their possessions in this list. The reasons given were that periodicals were not catalogued or that the staff at their disposal was inadequate. It is obvious that full advantage cannot be taken of the resources of Canadian libraries if a proportion of them are com-

pelled to neglect the preservation and cataloguing of serials. Further, Canadian science will be under a distinct handicap until steps are taken to provide the libraries with adequate competent assistance.

Despite the difficulties confronting them, the compilers have produced a work which should prove of considerable aid to scientific workers in the Dominion, and they are to be congratulated upon the completion of a volume which bears evidence of much care and painstaking labour. Due credit should also be given to the Canadian Department of Scientific and Industrial Research, the material co-operation of which enabled the early publication of the volume.

F. W. CLIFFORD.

### University and Educational Intelligence.

ABERDEEN.—The Fullerton Research Scholarship in natural science has been awarded to Miss Elizabeth T. Geddes.

GLASGOW.—The King has been pleased to approve the appointment of Mr. James Montagu Frank Drummond to the regius chair of botany in the University, vacant by the retirement of Prof. F. O. Bower. Mr. Drummond took first-class honours in the Natural Sciences Tripos at Cambridge in 1904, and gained the Frank Smart Studentship for research in botany at Gonville and Caius College. He became lecturer in botany at Armstrong College, Newcastle-upon-Tyne, and in 1909-1921 was lecturer in plant physiology in the botany department of the University of Glasgow. Since 1921 he has been Director of the Scottish Plant Research at Corstorphine, Edinburgh. During the War he served in Palestine, Egypt, and France, acting as battalion intelligence officer, and afterwards as brigade education officer. His published works refer chiefly to plant physiology, but include a series of papers on the "Botany of the Palestine Campaign" communicated to the Linnean Society.

LONDON.—The lectures which were to have been given early this month by the late Prof. J. I. Hunter at University College on "The Anatomy and Physiology of the Sympathetic Innervation of the Striated Muscle" will be delivered by Prof. G. Elliot Smith on January 19, 26, and February 2 at 5 o'clock.

The degree of Ph.D. in Science has been conferred on Mr. W. Jevons (Imperial College—Royal College of Science) for a thesis entitled "Spectroscopic Investigations in connexion with the Active Modification of Nitrogen" and other papers.

NOTICE is given by the Imperial College of Science and Technology, South Kensington, of the alteration in the date of the Entrance Scholarship Examination, which in 1925 will begin on April 24. Eighteen Scholarships, value 62*l.* 10*s.* each, are offered, six being tenable at the Royal College of Science, six at the Royal School of Mines, and six at the City and Guilds (Engineering) College, for admission at the beginning of the session, namely, the first Tuesday in October. Prospectuses and full particulars may be obtained on application to the Registrar, Imperial College, South Kensington, S.W.7.

APPLICATIONS are invited by Yale University for two Theresa Seessel Research Fellowships for the promotion of original research in biological studies, each yielding 300*l.* Preference will be given to candidates who have already obtained their doctorate, and have demonstrated by their work fitness to carry on

<sup>1</sup> A Catalogue of Scientific Periodicals in Canadian Libraries. Prepared by Dr. Gerhard R. Lomer and Margaret S. Mackay. Pp. xx+255. (Montreal: McGill University, 1924.) n.p.

successfully original research of a high order. The holder must reside in New Haven during the college year, ranging from October to June. Applications should be made to the Dean of the Graduate School, New Haven, Conn., U.S.A., before May 1 next, and should be accompanied by reprints of scientific publications, letters of recommendation, and a statement of the particular problem which the candidate expects to investigate.

THE Royal Technical College, Glasgow, directs attention in its report for 1923-24 to the part taken by it for many years in the further education of adults. The evening classes of last session were attended by 2587 adult students of ages ranging from twenty-one to seventy-five and, in addition, 546 enrolments were received for the "Elder" lectures on astronomy by Prof. George Forbes on "The Old Astronomy and the New," and by the Rev. E. Bruce Kirk on "Stars in their Associations." The College maintained also its press campaign for informing the public of the important part taken by chemistry in the life and industry of the country, and numerous papers of a popular character were published by members of the staff on such subjects as the utilisation of waste, chemistry and wireless, etc.

FROM the University of Leeds we have received a copy of the Council's annual report for 1923-24, which was issued on the eve of the Jubilee and "Coming of Age" celebrations of December 15-20. In it the Council announces, after summarising the serious and numerous present deficiencies in accommodation and equipment and in the provision for the social and athletic life of the University, that action is being taken to meet the most pressing requirements and to make the Jubilee year a starting-point for another period of progress. That they are able to do so is due in large measure to increased local aid. Grants from local authorities during the past year amounted to 30,000*l.*, not counting the fees, amounting to 4500*l.*, remitted to students as a condition of such grants. The other chief sources of revenue were: endowments, donations, and subscriptions, 21,000*l.*; parliamentary grants-in-aid, 58,000*l.*; and fees for tuition, examinations, graduation, Students' Union, etc., 60,000*l.*

THE December number of *The University Bulletin*, issued by the Association of University Teachers, contains an address by the president of the association, Prof. Alexander Mair, on the significance of this organisation as marking a distinct phase in the evolution of the university system in Great Britain. Among the many *éclaircissements* produced by the War were, Prof. Mair says, the revelation to English people that in the universities they had a *national* asset, and a clearer awareness on the part of the universities themselves of their function and destiny. A "get-together" spirit took the place of particularism, and one of the indications of this was the appearance of the Association of University Teachers. At present about 75 per cent. of all the teachers in the university institutions of England and Wales belong to its 25 branches, although "Oxford and Cambridge are still hesitant, and their absence makes the one (an important) gap in an otherwise continuous front." In referring to the spirit of co-operation as between universities and the recognition of their value to the nation as post-War phenomena, Prof. Mair seems to have overlooked the fact that the first Congress of Universities of the Empire took place, and the Universities Bureau of the British Empire was constituted in 1912.

### Early Science at the Royal Society.

**January 10, 1662/3.** Mr Howard mentioned a way of roasting in a very short time, with basting the meat with flames of lard poured upon it: Dr. Wilkins, that of boiling and stewing meat with lamps: Mr. Hoskyns, that of roasting many pieces of meat with a fiery globe of plated iron standing in the middle: Sir Cyril Wyche, that of keeping water and other things warm in a double pot, separated by an interstice.

**January 11, 1671/2.** Mr. Isaac Newton was elected. [Newton had written earlier "I am very sensible of the honour done me by the Bishop of Sarum in proposing me candidate, and which I hope will be further conferred upon me by my election into the society, and, if so, I shall endeavour to testify my gratitude, by communicating what my poor and solitary endeavours can effect towards the promoting philosophical design."]

**1664/5.** Sir Robert Moray mentioned, that the King had made an experiment of cold, with three glasses filled with sweet water, used for washing, one glass bigger than the other, taken out of a trunk by the King's barber, and freezing, after they had a very little while been opened, first at the top, and then with shootings of ice to the bottom, and so congealing together.

**January 13, 1663/4.** The president acquainting the council, that Mr. Hooke had discovered to himself, Sir Robert Moray, and Dr. Wilkins, an invention, which might prove useful to England, and to the world, and that he had a good opinion thereof; but that it was necessary, that some experiments should be made for farther certainty, before it was made public which would require some charges not so fit to be put upon the inventor; it was ordered, that the President, Sir Robert Moray, and Dr. Wilkins have power to employ any sum under ten pounds of the society's money for the said purpose.

**1669/70.** Mr. Oldenburg produced a manuscript sent and addressed to the president by Mr. Flamstead of Derby, giving an account of some of the more notable celestial phenomena of the year 1670 to be conspicuous in the English horizon, among which was an eclipse of the sun visible in England, April 9, but omitted by all other astronomers. The society declared that this was a very useful labour for the improvements of astronomy; and that therefore the author should receive their thanks by the secretary.

**January 15, 1661/2.** Prince Rupert sent the society a description in High Dutch, of the method of making good gun-powder; which Mr. Oldenburg was desired to translate, and Sir Robert Moray to return their thanks to his highness.

**1673/4.** It being moved that Dr. Daniel Cox having made many observations and experiments concerning the nature and figures of all sorts of salts, might be desired to impart them to the society, he was desired accordingly, and promised, that he would do so, after he had viewed and examined such salts by such a microscope, as had been approved of for its goodness by the Society: and a microscope being brought by Mr. Cock to be examined, the trial of it was referred to a fitter time, it being then candle-light.

**January 16, 1667/8.** Mr. Oldenburg mentioned that he had received advice from Paris, that the person formerly said to have undertaken the translation of the "History of the Royal Society" into French, had not yet begun it, and was willing to forbear, upon notice sent him, that there was one in London, who would perform it. And Dr. de Molin being the person, who had undertaken that work in England, and now present, was desired by the Society to proceed in what he had begun with all possible care and diligence.