

and by the volume "Life by the Sea Shore, an Introduction to Natural History" (1901). Although Dr. Newbiggin then turned to the rapidly developing subject of geography, she maintained contact with biology in the Royal Physical Society of Edinburgh, of which she had been secretary and president, and as extra-mural lecturer on biology at the Womens' Medical School in Edinburgh until 1916. She published a work on animal geography (1913), and over a long period acted as assistant editor of the *Journal of the Royal Scottish Arboricultural Society*.

Dr. Newbiggin brought her knowledge of environmental influences to bear upon the study of human activities with great effect; and her numerous geographical writings possess special value because of this. Her earlier books, which were of a general character, included "Tillers of the Ground" (1910); "Modern Geography" (1911); and "Man and his Conquest of Nature" (1912). She travelled widely, and methodically built her careful observations into a series of valuable regional interpretations. Of special note are her works on southern Europe:

"Geographical Aspects of Balkan Problems" (1915); "Mediterranean Lands" (1924); and "Southern Europe" (1932).

As a lecturer in geography, Dr. Newbiggin was in great demand, and in recent years she gave regular courses at Bedford College, University of London. She rarely missed an International Geographical Congress, and she attended the meetings of the British Association regularly, presiding over Section E in 1922. She was the recipient of the Back Grant of the Royal Geographical Society in 1921 and the Livingstone Gold Medal of the Royal Scottish Geographical Society in 1923. The latter Society is especially in her debt for her loyal service and her unremitting labour in maintaining the high standard of its *Magazine* for thirty-two years.

WE regret to announce the death of Mr. H. Glauert, F.R.S., principal scientific officer at the Royal Aircraft Establishment, Farnborough, author of numerous papers on aerodynamics, on August 4, aged forty-one years.

## News and Views

### Prof. E. G. Coker's Retirement

PROF. E. G. COKER, who is this year retiring from the Kennedy chair of civil and mechanical engineering in University College, London, was appointed to his chair not long before the outbreak of the War, which found him in Australia, where he had gone as president of Section G of the British Association. In common with a number of other scientific workers, he had some unexpectedly exciting experiences on that occasion, narrowly escaping capture by the German cruiser *Emden*. Prof. Coker went to University College from the City and Guilds Technical College, Finsbury, where for some years he was the colleague of Silvanus Thompson, who was associated with some of his earlier work on polarised light. Before that time he was associate professor of civil engineering in McGill University, Montreal. Prof. Coker's name is chiefly associated, in the minds of engineers, with the direct exploration of stress in machines and structures by means of polarised light, a field which he has made peculiarly his own and which has been largely built up by his own efforts.

THE double-refraction caused by stress in transparent materials was discovered more than a century ago by Sir David Brewster, and the suggestion that this effect might be used to discover the stress-distribution in such materials was actually made by Brewster himself. Attempts in this direction were undertaken at various times, for example, by Clerk Maxwell, Carus Wilson, Mesnager and others, while the laws underlying the phenomenon have been investigated by a number of physicists. It was left to Coker, however, to develop the method, and to make it, by a variety of skilful contrivances (in particular his lateral extensometer), into a really

practical one. To him is due also the use of an easily workable material like celluloid for such investigations. By this means he has been able to solve a number of important problems relating to contact stresses, gears, test-pieces, architectural structures, etc., where mathematical analysis proved either inadequate or too complicated. For this work he created, at University College, a first-class research laboratory, which has attained a world-wide reputation. His recent treatise on "Photo-Elasticity", written in collaboration with his colleague, Prof. Filon, gives an exhaustive account of this subject, and embodies the results of a quarter of a century of continuous research. It is much to be hoped that this work will not be interrupted by Prof. Coker's retirement, and that he will continue, with unabated vigour and activity, to enrich engineering science in his chosen field.

### New Vice-Chancellor: University of Melbourne

MR. R. E. Priestley, fellow of Clare College, Cambridge, and Secretary General of the Faculties of the University, has been appointed Vice-Chancellor of the University of Melbourne. Mr. Priestley was educated at Tewkesbury Grammar School and entered the University of Bristol in 1905. In 1907 he joined Shackleton's *Nimrod* Expedition as geologist. On returning from the Antarctic in 1909 he spent a year as a research student at the University of Sydney, working up the results of the expedition with Prof. Edgworth David. The sudden illness of Scott's geologist led to Priestley joining Scott's last expedition one week before the boat left Sydney. From 1910 until 1913 he was scientific observer with the northern party, first at Cape Adair, then at Terra Nova Bay. During the latter period

he spent a winter in a snow cave on half rations. On his return from the south in 1913, Priestley entered Christ's College, Cambridge, as a fellow commoner and research student with the view of working up the results of the expedition. On the outbreak of the War, Priestley was commissioned in the London Wireless Signal Section and served in France. At the end of the War he spent some fifteen months writing the official history of the signal service in the War. On returning to Cambridge he studied for the agricultural diploma and was appointed lecturer in soil science. In 1923 he was elected a fellow of Clare College.

SINCE then, Mr. Priestley has devoted himself almost entirely to administrative work. In 1923 he was appointed secretary of the Board of Research Studies, in 1926 secretary of the Board of Examinations, and in the same year secretary of the newly constituted General Board of Studies. In all these offices Mr. Priestley has been a conspicuous success. The introduction of the new University statutes altered the whole character of the General Board of Studies. The magnitude and importance of the work of the Board has steadily grown during the past eight years, and in the spring of this year a new statute was approved creating a new office of Secretary General of the Faculties, an office which was placed in Schedule B. Mr. Priestley was appointed first Secretary General of the Faculties and appointed to a professorial fellowship at Clare College. As secretary of the Board of Research Studies he has been of very great help to the large number of research students at Cambridge, more particularly to those from abroad. Many of them will welcome him on his arrival in Australia. His departure from Cambridge will be a great loss both to his College and to the University, but he will carry with him the best wishes of his many friends at Cambridge, who are confident that the University of Melbourne will gain very greatly by his appointment.

#### Food Research

IN a paper on "the Research Movement and its Modern Developments", read at the spring meeting of the Manufacturing Confectioners' Alliance and the Food Manufacturers' Federation at Harrogate on May 13, Mr. A. L. Hetherington reviewed the way in which scientific research was being applied alike to industrial processes and to everyday life. Particular reference was made to the work being carried out under the Department of Scientific and Industrial Research through the various Research Associations, and more especially to the work of the Cocoa, Chocolate, Sugar Confectionery and Jam Manufacturers and of the Food Manufacturers' Research Association. The successful solution of the problem of bloom on chocolate was the result of a concentrated attack by a team of workers at the problem. Methods have been found of preventing mould growth and fermentation in jams, jellies, fondants, etc., without using prohibited preservatives, and the discovery of a method of slowing down the breakdown of the sugar in re-

heating sugar syrups has led to considerable savings in the use of high-grade sugars. Effective work has been done to combat infestation by the cocoa moth and other pests, and the Research Association's work has not only tended to raise the quality of the goods produced but also stimulated interest in the application of science and in the underlying principles of manufacture. In the view of the Advisory Council, no Research Association should be operating on a smaller scale than a minimum income of £10,000-£20,000 per annum, and Mr. Hetherington urged fuller support for the two food associations to raise their income to this minimum from the present inadequate £7,000 and £2,000 per annum.

#### Electric Shut-Down in London

THE sudden cessation of the supply of electricity over London and part of the south-east of England during midday on July 29 proves that even with the best machinery a breakdown in the supply is a possibility that has to be guarded against. Luckily it is an extremely rare occurrence. The trouble started apparently when the engineers were rearranging sections of the supply at the Battersea power station. A small section becoming overloaded, the automatic circuit breaker came into action. When the circuit breaker was closed the currents in two of the sections were probably not in synchronism and so a huge current circulated in the link connecting Battersea with the neighbouring station at Deptford West. The former had an output of 70,000 kilowatts at this moment and the latter of 90,000. The devices at Battersea declined to take the short circuit load, and several of the machines at Deptford shut down. The Barking Power Station had now to take the load, but the circuit breaker at Northfleet opened and the whole system ceased to operate. The effect was that the whole of the south-east area of the grid was suddenly deprived of 280,000 kilowatts of generating plant. The stations at Norwich and Brighton cleared themselves from the grid, the latter for about an hour. This affected the Southern Railway. The trouble was probably caused by the engineers taking advantage of the light load in summer to cut out certain transmission connexions for overhauling and so the grid system was not in full commission. It was not able to face the loss of Battersea, Barking and Deptford and still keep the whole system working. Notes on this shut-down are given in the *Electrical Times* of August 2.

#### Early British Camp

AN important discovery of, it is conjectured, either an early British camp or the site of the capital of one of the Kentish kings, is announced in the *Times* of August 6. The site is at Bigberry Woods, near Canterbury, and its exploration, which will occupy two seasons, has been undertaken by a committee, of which Lord Conway of Allington is chairman and Messrs. R. F. Jessup and N. C. Cook of the Maidstone Museum are the joint directors. A number of accidental finds have been made there in the past,