

of any two is altered to a known degree, the whole equilibrium involving the other six could be calculated. These relations he expressed in the form of nomograms in his book "Blood" which appeared in 1928. As the concentrations of the above factors in the blood are largely governed by its surroundings, Henderson's mind was much concerned with the general topic of 'environment', to which subject he made a contribution of great importance in his book "The Fitness of the Environment" (1913). Lastly, Henderson himself appreciated that the blood does not spend long enough in any one set of surroundings for the complete establishment of the equilibria appropriate to them; it is upon this subject that he is giving a short course of lectures on October 16, 17 and 18 at University College, London, and on October 19, 23 and 24 in the Physiological Laboratory, Cambridge.

Tribute to Prof. E. G. Coker

THE retirement of Prof. E. G. Coker from the Kennedy chair of civil and mechanical engineering in University College, London, was the subject of a couple of paragraphs in the News and Views columns of NATURE of August 11. Opportunity was then taken to refer to a few outstanding points in Prof. Coker's career and work, particularly his researches on the use of polarised light in determining the distribution of stress in machines and structures. On October 11, a complimentary dinner was given to Prof. Coker at University College, London, and he was presented with a cine-camera and a cheque by past and present colleagues and students. Lord Rutherford, who presided over a large assembly representing various departments of university teaching and research, recalled the days when Prof. Coker was associate professor of civil engineering in McGill University, Montreal, and he himself was Macdonald professor of physics in the same University. Since then Prof. Coker's pioneer work has been recognised by his election as a fellow of the Royal Society, and by the use of his results in solving many scientific and engineering problems. Prof. L. N. G. Filon, who collaborated with Prof. Coker in the production of the exhaustive treatise on photo-elasticity, published in 1932, added his tribute to that of Lord Rutherford. In his reply, Prof. Coker said that the council of the College has permitted him to take away much of the apparatus which he used in his researches, and that he proposes to continue his work in a laboratory which he has constructed near his home.

Thomas Henry, F.R.S. (1734-1816)

THOMAS HENRY, the senior member of that family of chemists whose exploits won for them no mean place in the history of the science, was born at Wrexham on October 26, 1734. On leaving the local grammar school, he was apprenticed to an apothecary at Wrexham, but completed his initial training at Knutsford, and afterwards became chief assistant to a Mr. Malbon at Oxford. In 1759 he returned to Knutsford, and in 1764 established himself as an

apothecary in Manchester, where he continued in practice for almost half a century. Notwithstanding his extensive practice, he was an ardent experimentalist and ambitious to extend the boundaries of chemical science. His numerous publications testify to his wide interests and his unremitting labour, "An Improved Method of Preparing Magnesia Alba", "Experiments on the Influence of Fixed Air on Vegetation", "Experiments on Ferments and Fermentation", and "The Nature of Wool, Silk, and Cotton as Objects of the Art of Dyeing" being a selection of the papers he communicated to learned societies. To-day his name is, perhaps, chiefly associated with "Henry's Calcined Magnesia", a preparation patented by him which is still on the market. Henry was elected a fellow of the Royal Society in 1775 on the recommendation of his friends Sir John Pringle, Joseph Priestley, and Benjamin Franklin. On the foundation of the Manchester Literary and Philosophical Society in 1781, he was elected one of the secretaries, and was the president from 1807 until his death in 1816. He was a keen educationist, and gave lectures in Manchester on chemistry and on bleaching, dyeing, and calico printing. Henry was essentially a practical man. He saw the need for the application of chemical knowledge to the arts and crafts, and in attempting to meet that need did much towards paving the way for the union of pure and applied chemistry.

Chemistry in Industry

BRITISH chemical industry has in recent years been the subject of political discussion, of Governmental action, and of no little anxiety among those who realise the effect which duties, quotas, restrictions, and the like may have for better or for worse on a great national enterprise which has scarcely reached adolescence. In a world of such complex economics, the necessity of an organisation whereby exchange of views and corporate action are facilitated becomes at once apparent, and it is therefore not surprising that the Association of British Chemical Manufacturers finds its activities and its responsibilities increasing year by year. In moving the adoption of the Council's report at the annual general meeting of the Association, held on October 11, the chairman, Mr. F. H. Carr, referred at some length to its activities, its extending influence, and its increasing membership. There has been an unusually heavy loss by death of leaders in the industry; reference was specially made to the late Sir Max Muspratt, a founder and a wise counsellor who played a great part in the development of British chemical industry and contributed in no small degree to the strength and reputation of the Association. By the service of Sir Max Muspratt and many men of like character and attainments, and by the devotion of the staff, the Association to-day finds itself able to protect the interests of British chemical manufacturers to a degree undreamed of when it was first formed. Its membership roll now includes no fewer than one hundred and eleven firms, and other applications are pending.

EXHIBITIONS and fairs are always a source of concern to firms which have to consider how far the results attained justify substantial expense. The Association of British Chemical Manufacturers, not unmindful of the fact that the key industry duties on fine chemicals will, unless removed, expire in 1936, urges manufacturers to exhibit at the forthcoming British Industries Fair in order to show the general public and those in authority how great and wise a use has already been made of that protection. Recent trade statistics show a marked increase in the importation of chemical products which are made in Great Britain; chemical exports have also increased, but to a smaller extent. Doubtless there is ground for investigation whether the best use is being made of our tariff system, for further attention by manufacturers to the necessity of endeavouring constantly to increase the attractiveness of their products in the world's markets, and for greater consideration by buyers of the claims, *ceteris paribus*, of home manufactures. The Ottawa agreements have benefited the chemical industry in many directions, although certain unexpected difficulties have arisen. Mr. Carr warned his audience that if the Ottawa idea is to be continued and expanded, there is an urgent need for the economic planning of agriculture and of industry in the Empire. Consideration has lately been given also to the position of the chemical and allied industries in relation to Government-owned patents, and a scheme of co-operation with the Department of Scientific and Industrial Research and the British Chemical Plant Manufacturers' Association has been evolved. Other sections of the report or of the chairman's address referred to safety measures, transport, poisons rules, the fine chemical industry, and the dyestuffs industry.

The Government Laboratory

REPORTING on the work of the Government Laboratory for the year ended March 31, 1934 (London: H.M. Stationery Office, 1934. 9d. net), the Government Chemist, Sir Robert Robertson, refers *inter alia* to the frequent necessity for investigating work in connexion with chemical tests on imported goods and articles of commerce. He briefly summarises the results of tests applied to dairy products, and once again mentions that there is no standard, as regards fat content, for cream in Great Britain, and no regulations relating to the marking of skimmed or partially skimmed milk cheese. A curious incrustation on the surface of stored marine shells was found to consist of calcium acetate. The shells had been stored in drawers of oakwood, which is known to evolve traces of acetic acid continuously, and the effect was attributed to the localised action of acetic acid attracted by the deliquescent residue from seawater salts. Among the great variety of duties performed by the Laboratory during the year, in addition to numerous analyses of foods, drugs, fertilisers, water, beverages, dyes, oils, silk, etc., were the restoration of medals and plaques for the Imperial War Museum, detection of the fraudulent use of stamps, a search for the cause of earthy flavour in

fish, complete analyses of rocks for the Geological Survey, the recovery of radium from decayed luminous paint, and the examination of materials purchased for the public service.

Whale-Marking in South Georgia

IN view of the complete lack of accurate knowledge on the migrations of whales, the "Discovery" Committee has for the past nine years been conducting experiments in whale-marking. The only practicable method of marking is by shooting a mark into the blubber from a gun. In the first series of experiments the mark used consisted of a barbed pin attached to a disc designed to lie flush with the surface of the body. Numbers of whales were marked by this means, but no marks were returned from those engaged in the whaling industry. At the Marine Biological Station in South Georgia it was found that *Pennella*, a parasitic copepod which infects whales in temperate and sub-tropical regions, was rapidly extruded from the blubber when the whales visited the cold waters of the Antarctic, and since this parasite is very firmly anchored in its host, it is practically certain that the whale marks were extruded in the same way. Another pattern of mark was devised—a short length of stainless steel tubing fitted with a leaden head. This mark is designed to embed itself completely in the blubber; when once the wound of entry has healed, the mark cannot fall out, and it will be found without difficulty by the whalers when the blubber is stripped from the carcass. Experiments conducted with this pattern give promise of success: five of the marks used have been recovered, three after the lapse of a few weeks and two after thirteen months. In no case was there any sign of suppuration, and in some the wound could not be found. All the whales were in good condition. The Committee is now undertaking whale-marking on a larger scale. One of its scientific staff, Mr. A. H. Laurie, left England in September to carry out the work in South Georgia, and on October 16 the R.R.S. *William Scoresby* left for the whaling grounds off Bouvet Island and Enderby Land on a whale-marking cruise. Mr. G. W. Rayner, who has conducted many of the earlier experiments, is scientific officer in charge, with Lieutenant C. R. U. Boothby in executive command.

National Trust's New Property in Derbyshire

By the generous gift of Mr. F. A. Holmes of Buxton, announced on October 10, Stanton Moor Edge, near Rowsley, Derbyshire, becomes the property of the National Trust. This body is already the owner of three properties in the immediate neighbourhood, Shining Cliff Woodlands at Ambergate, Duffield Castle and Taddington Wood. The new acquisition consists of 28 acres and is an escarpment, 900 ft. above sea-level, which forms a natural terrace a mile in length, looking out over moorland and the valleys of the Wye and Derwent. Not only is the view from this escarpment of great natural beauty, but it is situated in the middle of an area of exceptional interest for the historian and archæo-