

The great debt which botanical science owes to Pascher is the elucidation of the diverse lines along which algal evolution from flagellate stocks has taken place and of the definite pattern followed in this evolution. His numerous papers, however, include many other important contributions to the knowledge of Protista. Outstanding among these are the extensive studies of amoeboid and rhizopodial forms of Algae, which first disclosed clearly the significance of amoeboid organisation, the exposure of the manifold relations between pigmented and colourless flagellate organisms, and the recognition of the affinity between Diatoms, Chrysophyceae and Xanthophyceae.

Later generations will no doubt also acknowledge the debt owed to Pascher in respect of the publication of the "Süsswasserflora", which probably gave an even greater stimulus to freshwater algology than did Oltmanns' book. Pascher's own contribution to this series of volumes was very considerable, and includes some of the most valuable parts. It is much to be deplored that he did not survive to produce a second edition of the volumes dealing with the Flagellata, of which he had so unrivalled a knowledge. His last comprehensive publication is the volume on Heterokontae in Rabenhorst's "Kryptogamenflora", which was completed in 1939.

Pascher's numerous papers are characterized by lucidity and by the excellence of the accompanying illustrations, although sometimes a little marred by hasty editing. Most of his work was published in the *Archiv für Protistenkunde* and the *Beihefte der Botanisches Centralblatt*, of both of which he was editor for a long period of years. His was a lovable, though sometimes rather impetuous, personality.

F. E. FRITSCH

Mr. H. Brearley

MR. HARRY BREARLEY, the inventor of stainless steel, died on July 14 at the age of seventy-seven. A native of Sheffield, and the eighth child of a family brought up in "Ramsden's Yard", of which he has given a vivid account in a delightful autobiography, "Knotted String", he had only an elementary school education and then worked as a cellar lad in a crucible steel works. He was fortunate in being taken from this to be a laboratory boy under a capable and kindly analyst, who persuaded him to attend evening classes. He married young, and quite early collaborated with Fred Ibbotson in a book on the analysis

of steelworks materials. In 1914 he went to Riga, then a Russian town, as chemist in a steel works associated with Messrs. Firth of Sheffield, where he improved the technique of hardening armour-piercing shells, having also to act as managing director when the Russian Revolution came and many members of the staff left. On returning to Sheffield he took charge of the Brown-Firth Laboratory, installed jointly by two neighbouring firms. Difficulties in the making of armour plates led him to the further study of the thermal treatment of alloy steels.

His introduction of a steel containing chromium with low carbon was intended to provide a more durable lining for gun barrels, and it was the observation that specimens in the laboratory, under certain conditions of heat treatment, were highly resistant to corrosion that suggested their use for cutlery. A Sheffield firm, R. F. Mosley, produced knives made of this steel which were not stained by fruit acids or similar solutions. Difficulties arose over the ownership of the invention, and in 1915 Brearley left the firm and joined Messrs. Brown Bayley, also of Sheffield. For a time, the patents were controlled by a special organisation, the Firth-Brearley Syndicate. Patent litigation involved a visit to the United States. Brearley retired in 1925 to Torquay. He and his brother devised the method of studying ingot structure by casting and sectioning wax models. He was awarded the Bessemer Gold Medal of the Iron and Steel Institute in 1920.

Without a university training, Brearley had a remarkable command of lucid English, and his books are models of their kind. A man of sturdy independence, a lover of good literature, and a metallurgist who rendered great services to the steel industry and to the men employed in it, he has a strong claim to be remembered among pioneers in industry.

C. H. DESCH

WE regret to announce the following deaths:

Dr. William Cullen, well known for his work in mining engineering and explosives, on August 14, aged eighty-one.

Prof. Beatrice Edgell, emeritus professor of psychology, Bedford College, London, on August 10, aged seventy-six.

Dr. Alexander Smith, assistant mycologist at the Ministry of Agriculture and Fisheries Plant Pathology Laboratory, Harpenden, on July 23, aged fifty-four.

NEWS and VIEWS

Chair of Entomology, University of Illinois:

Prof. G. Fraenkel

DR. G. FRAENKEL, lecturer in physiology in the Department of Zoology and Applied Entomology at the Imperial College of Science and Technology, London, has been appointed professor of entomology in the University of Illinois, Urbana, Ill., to take charge of the newly founded sub-section of insect physiology. Dr. Fraenkel, who was educated at the University of Munich, was an assistant in the Department of Zoology in the Hebrew University, Jerusalem, during 1928-30. During 1931-33, he was *Privatdozent* in zoology in the University of Frankfurt. From 1933 onwards, he has carried out research in insect physiology and the orientation of invertebrates at University College, London, and the Imperial College.

Dr. Fraenkel has held his post as lecturer in physiology in the Imperial College since 1938. Most of Dr. Fraenkel's researches have been confined to insect physiology, including reflexes, pupation hormone of flies, function of halteres of flies, properties of cuticle and respiration. Since 1940 he has made a comprehensive study of insect nutrition supported by the Royal Society and, later, by the Medical Research Council. During the spring and early summer of 1947 he was guest professor in the University of Minnesota, where he gave a course of lectures on insect nutrition.

The National Radium Trust and Commission

WITH the coming into force of the National Health Act on July 5, the affairs of the National Radium Trust and the Radium Commission are being wound