

OBITUARIES

Prof. Alfred Wohl

PROF. ALFRED WOHL died in Stockholm on December 25, 1939, at the age of seventy-six years. He was born on October 3, 1863, at Graudenz and received his early training at the Universities of Heidelberg and Berlin. He obtained his doctorate in 1886 at the University of Berlin, working under the supervision of Prof. A. W. von Hoffman, and spent the next two years in the *Laboratorium des Vereins für Rübenzuckerindustrie*, Berlin. In 1891 he became *Privat-dozent* in Emil Fischer's laboratory in the University of Berlin, and in 1904 was appointed director of the Laboratory for Organic Chemistry and Technology at the *Technische Hochschule*, Danzig, a post which he held until he retired on reaching his seventieth birthday in 1933.

During a period of almost fifty years uninterrupted research, Wohl made many important contributions to both organic and physical chemistry. His early connexion with the sugar industry probably laid the foundation for his deep interest in this branch of organic chemistry. We owe to him methods for the degradation of sugars, the preparation of the optically active glyceraldehyde and much of our early knowledge of fermentation enzymes. He also devised methods of making artificial honey which are still in use to-day, and during the War of 1914-18 produced an economical process for growing yeast.

In other branches of organic chemistry, Wohl carried out the synthesis and investigation of many important compounds such as phenylhydroxylamine, the semi-aldehyde of malonic acid, malic and tartaric dialdehydes, lactic acid aldehyde, the acetal of methyl glyoxal, and the preparation of glyoxal by the interesting method of the ozonization of acetylene. He also showed that nitrobenzene reacts with potash to give nitrophenol.

One of Wohl's outstanding achievements was the demonstration of the wide applicability of vanadium pentoxide as an oxidation catalyst; by its use he carried out the oxidation of naphthalene to phthalic anhydride and of anthracene to anthraquinone, and thus opened a new path to the cheap production of intermediates for the dyestuffs industry.

Wohl always showed a fervent interest in the theoretical aspects of organic chemistry, and developed a theory of chemical reactivity based on Michael's theory of primary association of reaction spots and on the polarity of linkages. Much of his work was devoted to the substantiation of these ideas and in this respect he made special studies of the reactivity of bromacetamide, hydrazonium compounds, and of the Friedel-Crafts synthesis. His interest in theory extended to physical chemistry and his most important contribution in this field was the formulation of an equation of state for gases, based upon a simple modification of van der Waals' equation. He also published a series of papers in the *Berichte* on methods

of analysis of gases. In developing these methods, he devised a new type of glass tap and also a means of producing vacua suitable for low-pressure distillations by the use of charcoal cooled by liquid air and an ordinary filter-pump.

Wohl was a man of outstanding personality and an enthusiastic, ardent, and inspiring teacher. He spared no effort to help his students, and during term it was his daily practice to gather them together in small groups in the laboratory and discuss with them their research problems.

Many honours were conferred on Wohl. He held the office of president in the *Deutsche Chemische Gesellschaft* in 1933 and was given the honorary degree of Dr. Ing. of the *Technische Hochschule*, Hanover, in 1928, and Dr. Agr. of the *Landwirtschaftliche Hochschule*, Berlin, in 1931.

Although he retired in 1933, he carried on experimental work until 1938, and in his last years developed a process for the manufacture of pulp from fibrous vegetable materials.

Mr. R. A. Smith

WE regret to record the death, at the age of sixty-six years, of Mr. Reginald A. Smith, formerly keeper of the Department of British and Medieval Antiquities of the British Museum, which took place at Colchester on January 13.

Reginald Allender Smith was born in 1873 and educated at Christ's Hospital and University College, Oxford. In 1898 he was appointed to the staff of the British Museum in the Department of Ethnography and British and Medieval Antiquities, as it then was, of which Charles Hercules Read was at that time keeper. Smith was assigned to the archaeological collections, of which he became keeper in 1927, after the ethnographical collections had become a distinct department. He retired in 1938.

Smith was fortunate both in his chief and in the nature of his duties—the care and arrangement of the prehistoric and early historic collections of antiquities of the Museum. By his association with Read he was trained in that appreciation of the significance of form and technique in which his chief was pre-eminent, while his care for, and arrangement of, the collections committed to his charge developed to the full his capabilities of scientific precision in observation and interpretation of detail which enabled him during a period of nearly forty years to make to the advancement of archaeological studies a contribution which was no less valuable than it was individual, and, indeed, unique.

A variety of circumstances combined to afford Smith the opportunity to attain the position which he afterwards held in the archaeological world. Of these, one of the most influential was the part assigned to him in carrying out the policy initiated

early in his career at the Museum of issuing guides to the archaeological collections, of which the first, on the Stone Age, appeared in 1902. Smith was mainly or solely responsible for the valuable guides, both in the original and in the revised editions, to the Stone, Bronze, and Iron Ages collections as well as to those of the Romano-British and Anglo-Saxon periods.

The preparation of these guides demanded an intimate and detailed knowledge and understanding of the characteristics of each individual specimen in the collections in relation to general typology as well as to the development of theoretical reconstruction in prehistoric and early historic studies. An even broader view was demanded in Smith's contribution of archaeological chapters to early volumes of the "Victoria History of the Counties of England", which had commenced publication also early in Smith's career.

This thorough grounding in knowledge of the detailed evidence bearing upon British archaeology proved of enormous service to scientific studies when Smith in 1908 joined the Council of the Society of Antiquaries of London, and afterwards became its honorary secretary and then its director, an office which he held for many years. Through the ramifications of the Society's many activities he was in close touch with archaeological research in the field throughout Britain as well as on the Continent. Not only did he himself make many valuable contributions to archaeological literature in its technical periodicals—his most considerable publication was an exhaustive illustrated catalogue of the Sturge collection of stone implements—but also he came to be widely recognized as, in a sense, a court of final appeal on the value and significance of any new discovery, or any fresh evidence bearing on previously ascertained facts in the prehistoric field of Britain. In the records of archaeological discovery of the last twenty years, no name, with the possible exception of that of the Abbé Breuil, is more frequently quoted as responsible for an authoritative and final opinion than that of Reginald Smith.

Mr. G. L. Bates

MR. G. L. BATES, who died on January 31, was born in the State of Illinois in 1863. He was the eldest son of a large family, and inherited his love of natural history from his mother. He was educated at Galesburg and Chicago, and it was his father's wish that he should enter the Church. However, he had a great desire to travel and study Nature, and he persuaded his father to send him to West Africa in 1895. His first years were spent in Gabon and the French Congo, and later he settled in the former German colony of Cameroon.

In 1896 Bates began to send collections to the British Museum, and up to 1928 there was a steady stream of specimens in all groups. Though primarily an ornithologist, Bates did not confine his collecting to birds, and he had the reputation as a very successful collector of reptiles, discovering some sixty-two new species, including *Rana goliath* and *Trichobatrachus*

robustus, the curious hairy frog. In mammals, too, he made many discoveries, and his specimens of plants and fishes are models of careful collecting. From 1923 onwards he made many expeditions to different parts of West Africa, including a trip to the Southern Sahara, where he made some interesting observations on the affinities of the Saharan avifauna. Later he undertook the study of Arabian birds, and in 1934 paid a visit to Mr. H. St. J. Philby at Jedda.

Apart from his expeditions, Bates will always be remembered for his papers on the reversed underwing coverts of birds, and his study of the genus *Smithornis*. In this last he proved by anatomical evidence that the genus had nothing to do with the normal *Passeres*. This was confirmed later by P. R. Lowe, who demonstrated that the true position was in the Asiatic *Eurylamidae*. Perhaps Bates's most important contribution to ornithology was on the "Geographical Variation within the Limits of West Africa", in which he showed that these variations, whether in colour or size, fall within certain rules. In 1930 he published a useful little "Handbook of the Birds of West Africa".

Bates's shy and retiring nature was increased by long residence alone, but nevertheless, no one was more ready to help others, and he will be missed by many. In the late autumn he underwent a serious operation from which he never fully recovered.

N. B. KINNEAR.

Prof. Fritz de Quervain

PROF. FRITZ DE QUERVAIN, an eminent Swiss surgeon, who died last month at the age of seventy-one years, was born at Sion, the capital of the Valais Canton, on May 4, 1868. He received his medical education in Bern, where he was assistant to Kronecker the physiologist from 1889 until 1891 and to Langhans the pathologist from 1891 until 1892, when he qualified. For the next two years he was assistant in Kocher's surgical clinic, and then entered on a surgical practice at Chaux-de-Fonds, where he became director of the surgical clinic in 1897. In 1902 he returned to Bern, where he remained until 1909, when he was appointed professor of surgery in the Basle faculty of medicine, and finally in 1918 occupied the corresponding chair at Bern.

WE regret to announce the following deaths:

Lieut.-Colonel J. A. Amyot, C.M.G., lately Canadian deputy minister of pensions and national health, formerly professor of hygiene in the University of Toronto, aged seventy-two years.

Colonel R. E. B. Crompton, C.B., F.R.S., a pioneer in electrical engineering and mechanical road traction, on February 15, aged ninety-four years.

Mr. H. G. Newth, lecturer in zoology in the University of Birmingham, on February 17.

Prof. C. Tangl, director of the Institute of Experimental Physics, University of Budapest, on December 10, aged seventy-one years.