DR. GILBERT J. FOWLER—OBITUARY

DR. GILBERT JOHN FOWLER, who died on March 21, 1953, at Bangalore, was a great authority on the subjects of treatment of sewage and trade effluents and of nitrogen conservation. He will be principally remembered as the pioneer of the Activated Sludge Process, which is perhaps the most efficient and hygienic method of sewage treatment so far developed.

Gilbert John Fowler was born in Paris on January 23, 1868. He was educated at Owen's College, Victoria University, Manchester, where he became a Demonstrator in Chemistry after taking his B.Sc. Degree. Later he was appointed a Lecturer in the University of Manchester and Consulting Chemist to the Rivers Committee of Manchester Corporation. During this period (1896-1916) he was responsible for the treatment of sewage and trade effluents of Manchester. He was awarded the D.Sc. Degree of the University of Heidelberg in 1904. He won international reputation when he and his associates, particularly the late Dr. E. Ardern and Mr. W. T. Lockett, developed at Manchester the Activated Sludge Process in 1914.

On problems of sewage disposal Dr. Fowler was consulted by the cities of New York, Cairo, Shanghai and Hankow, and by the Government of Federated Malay States. He was also a consultant to the Government of India and to various State Governments. He had been periodically visiting India in an advisory capacity from 1906 and in February 1916 he took his permanent residence in India when he became the Professor of Applied Chemistry and later (1921) of Biochemistry in the Indian Institute of Science, Bangalore. Even after his retirement from the Institute in 1924, he was taking very keen interest in the activities of the Department. Excepting for brief periods, *e.g.*, when he was the Principal of the Harcourt Butler Technological Institute at Kanpur (1927-29), he was throughout in Bangalore.

One of the most important lines of work in the Department of Biochemistry since Dr. Fowler's association with the Department has been naturally concerned with the scientific control of sewage and refuse disposal in all its aspects including its relation to agriculture. In 1922 an activated sludge plant was designed and set up at the Institute capable of dealing with the sewage from a campus of 400 people. This installation has enabled important fundamental research to be done on the biochemistry of the process which has thrown considerable light on the mechanism of aerobic purification of sewage. After a visit to Rothamsted in 1921 when he became acquainted with the so-called ADCO process, Dr. Fowler took a great interest in the production of compost. Since then the subject has become one of the leading manurial activities of India and many students of the Biochemistry Department have taken an important part in the work throughout the country. He was continually interested in activated sludge, in compost and in other aspects of recovery of nitrogen from waste materials for soil fertilisation and crop production. In articles, in lectures and addresses he was not tired of developing and enlarging his most favourite theme of nitrogen conservation.

Dr. Fowler has written three books, *viz.*, *Sewage Works Analyses* (1902), *An Introduction to Bacteriological and Enzyme Chemistry* (1911) and *An Introduction to the Biochemistry of Nitrogen Conservation* (1934), a pamphlet entitled *Energy and Economics—A Plea for a New View Point* (1941), and a large number of papers and articles in various journals. He was the Technical Representative of Messrs. Activated Sludge, Ltd., London, for India and the East from 1925. He was a Fellow of the Royal Institute of Chemistry (and the Hon. Corresponding Secretary for India till 1951); Fellow of Chemical Society of England; Fellow of the Royal Sanitary Institute; Hon. Member of Manchester Literary and Philosophical Society; and Member of Industrial Research Council of the Government of India, 1937-39. He was President of Chemical Section of Indian Science Congress in 1918; of Indian Chemical Society in 1927; and of the Society of Biological Chemists, India, 1947-49.

Dr. Fowler was held in high esteem and regard by those who came into contact with him. He is survived by his wife and two sons.

K. V. GIRI.
R. RAJAGOPALAN.
S. C. PILLAI.