

He Conquered Death

The Story of Frederick Grant Banting. By Margaret Mason Shaw. Pp. xiii+111+11 plates. (Toronto: The Macmillan Co. of Canada, Ltd., 1946.) 8s. 6d. net.

INFORMING children of famous discoveries in science presents many difficulties, and the method of tracing the biography of the discoverer is probably likely to be most successful. With a man of such varied interests and lovable qualities as the late Sir Frederick Banting, the task of the biographer is made easy. Yet Miss Shaw, who worked under Banting for eleven years at the University of Toronto, must be commended for the skill with which she has kept faith with Banting's tenacity for truth and for the way in which she stimulates the imaginative faculties of the young readers for whom her book is intended. This she achieves by allowing Banting's life-story to be told by a practising doctor, who was a contemporary of Banting in his undergraduate days, to a group of interested boys. As the story unfolds they learn of the discovery which made Banting world-famous, the methods and attitudes of research workers in general, Banting's marked abilities as a painter and his friendship with A. Y. Jackson, his experiences in two world wars in military medicine, and other events and incidents which made up a full and varied life. Miss Shaw has written a moving account of the great Canadian man of science which should be bought for every juvenile library where English is read.

T. H. HAWKINS

Survey of Askham Bog

By Bootham School. Pp. 75. (London: Bannisdale Press, 1946.) 8s. 6d.

IN 1879, three Bootham School masters, assisted by local naturalists, made a thorough survey of Askham Bog near York. Their report was published in a magazine published for the Society of Friends Schools called the *Natural History Journal*. Recently this report was discovered by Mr. Clifford Smith, the present biology master at Bootham, who had the happy idea of making another survey of the same area. The present report is a record of the patient team-work of ninety Bootham boys under Mr. Smith's general direction.

The bog itself is a small piece of swampy ground about a mile and a quarter in total length and at no point more than a quarter of a mile broad. Much of the bog remains more or less as it was when the original survey was written; this adds greater significance to the recent investigation. Independent surveys were made into the geology, botany and zoology of the bog, and these were brought together in a general ecological report and summary. All these sections were recorded and reported by the boys themselves.

The value of the report lies not so much in the findings—although the discovery that the bog could not be fitted into any of the generally accepted ecological categories is of intrinsic importance—as in its educational worth. By giving boys experience in accurate observation, by teaching methodical recording of what they had seen, and by quickening the desire for further knowledge, this project has made a useful contribution to increasing the talents of the individuals concerned and to their harmonious development. It is noteworthy that several of the participants have already passed beyond the stage of being interested amateurs in natural history.

A Laboratory Manual of Qualitative Organic Analysis

By Dr. H. T. Openshaw. Pp. viii+95. (Cambridge: At the University Press, 1946.) 6s. net.

ALTHOUGH there are already many books which deal with this subject, it is usually only a part of the whole, and a small volume devoted entirely to organic identification is a welcome addition. This work is written for students, is based on the author's many years teaching experience, and has been thoroughly tested in practice. The first part describes a series of tests for the more characteristic groups commonly encountered in organic compounds, but the larger part deals with the final identification of an organic substance by the preparation of a suitable derivative, the melting point of which (and mixed melting point) can be determined: in this part directions are given for the preparation of each derivative, and indications as to which is likely to prove suitable for the purpose in view in any particular case. Tables of melting points of various derivatives of all the commoner organic compounds which might be met by the student are given, and these are sufficiently complete to make them of value to research workers. The book can be confidently recommended to all those studying or teaching organic chemistry.

F. B. KIPPING

Practical Chemistry

For Medical Students. By William Klyne. Pp. xvi+460. (Edinburgh: E. and S. Livingstone, Ltd., 1946.) 20s. net.

THIS volume is a product of the experience gained in teaching medical students in the University of Edinburgh and deals with practical chemistry for such students from A to Z. General scientific method is first discussed in a manner which should go far to explaining to the dullest student exactly why he is performing an experiment, and indeed why experiments are ever performed. There follows a general account of practical methods such as heating and cooling, production of reduced pressures, crystallization, weighing, etc., in fact all those operations which must first be mastered by a student. The later parts of the book deal with general and physical chemistry, inorganic chemistry and organic chemistry systematically, all treated from the point of view of the medical student. Throughout, great stress is laid on the methods of recording experimental results and of note-taking—topics on which most students are lamentably ignorant. Altogether the work seems to accomplish what it sets out to do in a very efficient manner.

The Cathode Ray Oscillograph in Industry

By Dr. W. Wilson. Second edition revised. Pp. xii+244. (London: Chapman and Hall, Ltd., 1946.) 18s. net.

THIS excellent technological book on the industrial applications of the cathode ray oscillograph has been considerably enlarged in this second edition by the author, particularly by the incorporation of new photographs, for one of which a magnification of 200,000 is claimed. The author excludes television tubes, but includes full descriptions of straight and pumped cathode ray tubes and varieties of the electron microscope, all of which in many forms have proved themselves key tools in recent scientific progress in industry.

L. E. C. HUGHES