The Photismi de Lumine of Maurolycus

A Chapter in Late Medieval Optics. Translated from the Latin into English by Henry Crew. Pp. xix+134. (New York: The Macmillan Company, 1940.) 15*s*. net.

"LIGHT concerning Light", the playful title given by Franciscus Maurolycus (1494–1575) to his short text on optics, suggests a certain sense of humour in the author, a prominent churchman and man of science of his day, which might have saved him from the inconsistency of outlook so painfully apparent from the modern point of view in this book. Mr. Henry Crew's charming translation brings within the reach of all a work which is in itself an eloquent comment on the folly of certain chapters in human thinking, especially the kind of thinking which strays over-far from experience and experiment.

As Mr. Crew remarks in his introduction, Euclid furnished the norm for a scientific demonstration throughout the sixteenth century. The assumptions, the data, the theorem and the logical steps to its establishment had to be set out in order. All is well in the early stages, when the law of reflection starts discussion of problems in geometrical optics, and it is even possible to get some distance in theorems regarding refraction, although only the qualitative and not the quantitative law of refraction is known. But when a writer seeks to cast his speculations on the origin of colours, the phenomena of the rainbow, the action of the human eye and the like into the same form, he lays a trap for the ignorant and unwary, who may fail to distinguish the sudden emptiness of speculation from the proper process of thought.

This book, then, makes a re-appearance largely on account of its human interest, though it is a worthy addition to the historical optical literature already available in English. At a time when half the world appears ready to abandon sanity for catch-words and catch notions, anything which by attention to past follies would help mankind to detect its present ones seems like a draught of water in dry weather. The book would make a very suitable present for certain folk of the present day who write pontifically on vast problems with the aid of a little elementary chemistry and biology.

The publishers are to be congratulated on the attractive binding and excellent printing, which make this little book a pleasure to handle. L. C. M.

Quantitative Analysis

By Prof. Harold Simmons Booth and Prof. Vivian Richard Damerell. (International Chemical Series.) Pp. xi+246. (New York and London: McGraw-Hill Book Co., Inc., 1940.) 15*s*.

IN "Quantitative Analysis" Profs. Booth and Damerell have produced a text-book avowedly for elementary students, but it covers a fairly wide field in its thirty-four chapters. The authors have set out with the intention of impressing upon beginners in analytical chemistry the vital necessity for extreme accuracy. Indeed the clue to the whole tenor of the book is to be found in the introductory chapter where the authors state that "one of the most important requirements for successful experimental work is to be honest with oneself. A high degree of personal integrity is absolutely necessary for lasting success in any science". To ensure that the student will thoroughly digest these truths, the authors have taken the greatest care to give very full details of procedure and explanations of experiments. In fact the wealth of advice, warning and instruction on laboratory technique which normally one learns only by long and often costly experience constitutes a novel feature of this text-book.

The actual experimental work described is confined to the determination of simple elements and radicals and has been selected not with the intention of being exhaustive but with the object of illustrating the basic principles of quantitative analysis. The general theory of gravimetric and volumetric analysis is simply but lucidly explained, and each chapter of the book contains a set of questions whereby the student can subject himself to a "self-examination".

This book can confidently be recommended to beginners in chemistry, and if the student assimilates both the chemical knowledge and the wealth of practical detail contained in the volume, he can scarcely fail to emerge as a most careful and highly qualified analyst.

Select Bibliography of South African Native Life and Problems

Compiled for the Inter-University Committee for African Studies, under the direction of I. Schapera. Pp. xii+250. (London: Oxford University Press, 1941.) 10*s*. 6*d*. net.

A "SELECT" biography tends to arouse a certain diffidence, not to say mistrust, in the manner of its reception; but when the material is drawn from a space of four centuries and a literature of the proportions and character of that relating to the natives of South Africa, much weeding is necessary if a practical value is to be secured for anyone who is not already in a great measure expert. The danger of bias, which may be, and indeed often is quite unconscious, has been eliminated in this South African bibliography by calling in the assistance of experts each to be responsible for the department of native studies in which he is an accepted authority, such as, for example, Prof. M. R. Drennan (physical anthropology), or Dr. A. J. Goodwin and Prof. C. van Riet Lowe (archæology) or the Rev. C. M. Doke (linguistics). The editor, whose ability to take an objective and scientific view of native problems has been abundantly demonstrated on many previous occasions, has been responsible not only for the section covering ethnography, both general and tribal, but also for that which deals with the status of the modern native population. It is perhaps unnecessary to comment on the fact that this last-named is the most considerable section in the bibliography, covering 93 pages as against ethnography, 72 pages. The very brief notes following entries, and indicating the scope and character of the item catalogued, will be found helpful and trustworthy by young students.