

of the subject, but now it is more or less clear that it includes certain industrial operations, many of them general in industry but making up in the aggregate a chemical process. Such operations include evaporation, distillation, filtration, drying, and the like. Their control and the design of the plant require a specialist with wider knowledge than is usually possessed by the mechanical engineer; he must have chemical knowledge as well as one of stresses and strains, must understand corrosion as well as strength of materials.

The large number of mistakes still made in the design of chemical plant, the difficulty of getting suitable plant for special purposes, all emphasise the need for the chemical engineer and for a suitable course of training for him. This is not the place even to attempt to discuss what this should involve, but opinion seems to be crystallising that it should comprise the study of unit processes.

Such is the plan of the book edited by Prof. Olsen, who occupies the chair of chemical engineering at the Polytechnic, Brooklyn, in collaboration with thirteen experts, who are responsible between them for the sixteen chapters

which make up the book. In this way it is ensured that each unit process is described by one who is thoroughly acquainted with it from practical knowledge. The sections naturally vary in quality, particularly in their English; if some of the plant is as bad as the English, it should have a short life. There can be no reason why chemical engineering students should not be taught to express themselves correctly; the clear use of words is surely as important as that of figures.

The book is well printed, contains diagrams and some modern illustrations, and follows conventional lines. It is certainly packed with information. Perhaps the most novel feature is the section on plant location, compiled by J. L. Warner, in which this subject is discussed in a skilful and attractive manner. In the past, plants had a habit of locating themselves, often wrongly; to-day the utmost thought is given to finding the theoretically ideal location, again not always with success. So many factors come into play that the ideal is hard to achieve, though sometimes, as, for example, at the great Billingham works of Imperial Chemical Industries Ltd., a triumphant success is scored.

E. F. A.

Short Reviews

Flora of Syria, Palestine and Sinai: a Handbook of the Flowering Plants and Ferns, Native and Naturalized, from the Taurus to Ras Muhammad and from the Mediterranean Sea to the Syrian Desert. By Dr. George E. Post. (American University of Beirut: Publications of the Faculty of Arts and Sciences: Natural Science Series, No. 1.) Second edition, extensively revised and enlarged by John Edward Dinsmore. Vol. 1. Pp. xlv + 639. (Beirut: American Press; London: Oxford University Press, 1932.) 42s. net.

Post's "Flora of Syria, Palestine and Sinai" has been a work of reference for those engaged in studying the flora of the Near East since its original publication in 1896. It is based mainly on Boissier's "Flora Orientalis" and, like that great classic, has for some time needed drastic revision. The present (second) edition, of which the first volume is noticed here, retains the essential features of the original but has been considerably enlarged by the inclusion of many more species, mostly discovered in the area since 1896, and some additional figures. Since the whole work has been re-set, it seems unfortunate that Post's descriptions, often inadequate for purposes of exact identification, were not re-written. Many of the figures too should have been re-drawn.

The increase in our knowledge of the flora of

Palestine and adjacent territories in recent years, largely due to the botanical activities of the editor of the new edition and his colleagues and to Dr. Eig of the Hebrew University, Jerusalem, is indicated by a comparison of the new volume with the original flora. Thus, Post accepts 9 species of *Papaver*; Dinsmore records 21. The species of *Trifolium* have increased from 55 to 65; of *Astragalus* from 115 to 133; of *Silene* from 58 to 70. It should be pointed out that the new species in this volume are not here validly published since they are unaccompanied by a Latin diagnosis. It is to be hoped that a map will be included in the final volume.

W. B. T.

Organic Chemistry for Medical Students. By Prof. George Barger. Pp. xi + 249. (London and Edinburgh: Gurney and Jackson, 1932.) 12s. 6d. net.

PROF. BARGER has written this book through the conviction that the chief reason for including organic chemistry in the medical curriculum is to provide a basis for biochemistry. Necessarily, therefore, the book contains a good deal of matter which will appeal mainly to the medical student in his later years of study. It may be felt, indeed, that an attempt has been made to include too much within the space available, and that such advanced topics as stereoisomerism, glucosides,