Modern Paper-Making

By Robert Henderson Clapperton and William Henderson. Third edition. Pp. xii + 380. (Oxford : Basil Blackwell, 1947.) 30*s*. net.

THIS is the third edition of a book first published in 1929, when it at once established itself as a standard work on the practical aspects of paper-making. It owes this status to a somewhat rare combination of qualities, for not only does it contain valuable information, but also this information is imparted in a straightforward and understandable style. Since the authors are practical paper-makers of wide experience, it is understandable why their book has played such an important part in educating a younger generation of paper-mill workers.

It is with this in mind that a reviewer's comments must be judged. It may be argued that chemistry and physics should figure more prominently, especially in view of the increasing importance of the paper-mill laboratory. The answer is that the treatment is adequate, having in mind the requirements of readers of the above type. The opportunity of a third edition might also have been used to make some reference to the complete change in the raw materials situation since 1939, and in particular to the importance of straw and the wood pulp shortage, since the former has probably come to stay and the latter has reacted so strongly on the everyday life in Great Britain. On the other hand, the writers have confined themselves so strictly to practical paper-making matters in other respects that their decision that there has been insufficient change in general paper-making practice since 1941 to warrant rewriting the book must be accepted as wise in the circumstances.

The scope of the book covers fibrous raw materials for paper, boiling, bleaching and washing methods, beating and other beater operations, the paper machine (six excellent chapters, including one on newsprint manufacture), hand-made paper, finishing methods, paper testing, water supply and soda recovery. There are 157 clear illustrations, and the book concludes with an appendix of useful tabular matter, and an index.

It is a pleasure to be able to recommend this book unreservedly to all interested in the practical aspects of paper-making, and particularly to the student.

JULIUS GRANT

Lecture Experiments in Chemistry

Third edition, with Supplement. By G. Fowles. Pp. xvi+612. (London : G. Bell & Sons, Ltd., 1947.) 25*s*. net.

IN this, the third edition, some sixty experiments have been added as a supplement at the end of the book, and the bibliographies have been brought up to date. On the historical side, information which the author has found in "Chemical Pastime", by F. Accum, 1817, has led to the revision of the dates to a number of the experiments.

In Part 1 of the Supplement there are many valuable experiments, some of which deal with subject-matter not previously treated in the book, as, for example, osmotic pressure, indicators, soluble anhydrite as a drying agent, and the cleaning of mercury, while others are supplementary to those given in the previous edition. In this category all teachers of general chemistry will welcome the experiments on electrolysis with J. A. Mattuck's improved cell.

In Part 2 of the Supplement, experiments are described which will serve as an introduction to the effects of temperature, pressure and concentration on equilibria. In general this section is well done, but it is a pity that the experiments on the solubility of hydrogen chloride and sodium nitrite will not make it clear to the student that it is the heat change at the point of saturation which decides the effect of temperature on the solubility of a substance.

The previous editions of this book have received a very warm welcome and the reviewer is confident that this one will meet with a similar response ; it is, indeed, a book which no teacher of general and inorganic chemistry can afford to be without. The publishers are to be congratulated on the good quality of the paper and binding.

A. C. C.

Peach Orchards in England

Being an Account of How to Grow Good Peaches in this Country. By Justin Brooke. Pp. 86 + 12 plates. (London : Faber and Faber, Ltd., 1947.) 7*s*. 6*d*. net.

MR. JUSTIN BROOKE is an enthusiast with a sense of proportion. He grows fruit commercially on a considerable scale near Newmarket, has grown and marketed peaches since 1936, and outlines, in the present volume, details for a great expansion of the crop in Great Britain. The variety Peregrine yields heavy crops and is self-fertile ; it is best grafted upon the Broad Leaf Mussel stock. The author considers that peach blossom is rather less sensitive to damage by spring frosts than Victoria plum blossom. Manuring should be directed towards the production of vigorous growth, and pruning should also be subordinated to the same end. Thinning of fruit to one every four inches of branch is necessary, and the would-be grower will find adequate detail of all cultural aspects, and of pest and disease control, in the text and in the twelve excellent half-tone plates. Mr. Brooke points out that mechanized corn-growing and fruit production go well together, and it is greatly to be hoped that some of his readers will be stimulated to repeat his experiment in other parts of Britain. It would indeed be a national asset if peaches were within the economic reach of all members of the community.

Les plantes et la vie

Par Prof. Florian Cosandey. (Sciences et médecine, Série des Sciences naturelles.) Pp. 190+10 plates. (Lausanne : F. Rouge et Cie. ; Paris : Masson et Cie., 1945.) 210 francs.

THIS book, as stated in the introduction, is written for readers used to university lectures, but who are not specializing in science. It is written by the professor of botany at the University of Lausanne. The material is well chosen and the style attractive. The fundamental physical and chemical features of plants are described and illustrated by diagrams which bring out these relationships with clearness. Such matters as vitamins and hormones are briefly introduced to the reader, and the importance of molecular films is discussed in relation to the surface activity of the vacuole and cytoplasm. The general metabolism of the plant is treated in outline and the characteristics of organic acids, albumins, proteins, glucosides and alkaloids described. A chapter follows dealing with cell structure. There is a preliminary chapter which gives an outline on physico-chemical conceptions which will aid the non-scientific reader to appreciate the following chapters.

It appears that this is only one of a series of similar books dealing with various aspects of science and medicine.