only two substances : mustard gas, $S(CH_2.CH_2Cl)_2$, and lewisite, $CHCl:CH.AsCl_2$. Their action both on the skin and the other organs is very similar, but it is difficult to see much resemblance in their constitution except that they both contain chlorine. Most of the other noxious gases also contain one or other of the halogens, but they have practically no action on the epidermis. The other constituents that go to make a substance noxious appear to be sulphur, arsenic and $.NO_2$ and .CN groups, but why some substances are so much more effective than others is not always easy to understand. The property of being soluble in the body fats is probably of importance.

The third chapter discusses the classification of 'gases', but is not very helpful. In the body of the book the substances are arranged according to the toxic elements and groups that they contain, which probably is most convenient in a purely chemical work, but in practice these substances are generally classified according to their principal physiological action. A. MARSHALL.

Die Fermente und ihre Wirkungen

Von Prof. Dr. Carl Oppenheimer. Supplement, Lief. 1. (Bd. 1 : Specieller Teil : Hauptteil 7–15.) Pp. 160. Supplement. Lief. 2 (Bd. 1, Specieller Teil, Hauptteil 8). Pp. 161–320. Supplement. Lief. 3 (Bd. 1, Specieller Teil : Hauptteil 8, 9). Pp. 321–480. (Den Haag : W. Junk, 1936.) 28*s*. each.

PROF. C. OPPENHEIMER'S "Enzymes" has established for itself the position of a 'museum' of reference and information on this ever-growing subject. Such status is accompanied by the disadvantage that the complete work becomes too costly to possess individually and to replace by new editions even by the libraries. Yet if it is not kept up to date, especially in a subject which moves so rapidly, its utility rapidly lessens. To meet this difficulty, it is being re-issued in the form of a supplement to the special parts, which are those most useful for the scientific worker, and not to the complete work. Following the German practice, this supplement is appearing in parts, the first three of which are before us. The whole is to comprise two volumes, and is to be complete in ten parts within about two years at a cost of £8 10*s*. 0*d*. to those who subscribe in advance.

The present parts deal with the esterases, in particular the lipases of animal and vegetable origin, and the carbohydrases, covering both the enzymes which split the various glycosides and the amylases.

As before, every effort has been made to cover adequately the enormous and confusing literature of this vast subject, and there is at least evidence that more attention is being paid to the English and American publications. Any criticism in detail is obviously impossible : our reading satisfies us that the work has been carefully done, and that it is closely up to date.

Modern Surveying for Civil Engineers :

the Practice of Surveying, Estimating and Setting out Works of all Kinds, including Chapters on Modern Photographic and Aerial Surveying as applied to Engineering Enterprises. By H. F. Birchal. Pp. xi + 524 + 26 plates. (London : Chapman and Hall, Ltd., 1935.) 25*s*. net.

MANY books have been written on geodesy and surveying for civil engineers and surveyors, and of their authors many are engineers with Colonial experience. The volume under notice falls within the latter category, and therefore must be considered from this point of view.

The impression obtained is that the work will be extremely useful to an engineer in the Colonies who has already had some experience of the subject, and this alone would justify the brevity of treatment of the sections dealing with such matters as the calculation of closed theodolite traverses, the principles of levelling, and the methods of setting up of a level, theodolite or tacheometer. Many teachers of civil engineering would probably join with the reviewer in questioning the advisability of omitting the study of practical astronomy, while it would perhaps have been preferable if the consideration of circular curves had preceded that of transition curves, instead of following it. The standard method of finding the constants of a tacheometer in the field is not given, while Fig. 30 on p. 24 is wrongly drawn. In other respects, the work is exceedingly well illustrated, though some of the illustrations would repay full lettering and description.

The sections which deal with actual examples of large surveys of civil engineering works in the Colonies are very interesting and well set out, and should appeal to readers whose practice involves problems of such a kind. B. H. K.

Introduction to Vertebrate Embryology :

a Textbook for Colleges and Universities. By Prof. Waldo Shumway. Third edition, revised and enlarged. Pp. xii + 390. (New York : John Wiley and Sons, Inc. ; London : Chapman and Hall, Ltd., 1935.) 20*s*. net.

IN recasting his excellent text-book of vertebrate embryology for a third edition, Prof. Waldo Shumway has incorporated much new material, especially summarising the results of recent experimental research, but has maintained the lucidity and suggestiveness of the previous editions. In its new form, the book is an admirable introduction to cytology and genetics and a clear exposition of the new work on organisation, which has recently acquired fresh distinction by the award of the Nobel prize to Prof. Spemann.

Its value to the student is enhanced by the technical information about microscopy and the methods of histological procedure. Altogether it forms an admirable introduction to embryology and genetics which can confidently be commended both to students and teachers of this important part of anatomy.