common with such drugs. Notably, they have not the great drawback of most narcotics of inducing a craving for the constant repetition of the dose. Perhaps this character is partly determined by the circumstances in which these works are mostly used. Observation will confirm the general impression that such books are largely resorted to by elderly men of science, after working-hours, in the fastnesses of club libraries or by the domestic fireside. Mr. Sullivan's book is, however, useless for such purposes, for he defies slumber!

We do not remember to have read in English anything on the philosophical implications of science comparable to this little book for its wit. Easy writing is said to make hard reading, and, if the converse is true, an immense amount of labour must have been thrown into this series of very short chapters. Short though they are, many of them leave a feeling of remarkable completeness, and some of them, such as those on "Assumptions in Science" and "The Sceptic and the Spirits," are really little masterpieces in which we feel Mr. Sullivan has said the last word in the present state of knowledge.

There are many books on the nature of science and on its philosophical and ethical relationships, but there are very few that will appeal to younger people. Mr. Sullivan has, however, produced such a work. It can be safely placed in the hands of any student; most of it can be understood by any intelligent boy or girl of the age of sixteen; it is always challenging without ever being dogmatic, and witty without ever being cruel or "cheap." Any scientific man with the slightest philosophical bent must find this work stimulating and refreshing, and it is obviously written by one with a remarkably wide working knowledge of science.

C. S.

Handbuch der biologischen Arbeitsmethoden. Herausgegeben von Prof. Dr. Emil Abderhalden. Abt. IX: Methoden zur Erforschung der Leistungen der tierischen Organismus. Teil 4, Heft 1: Methoden der Erforschung bestimmter Funktionen bei einzelnen Tierarten. Lieferung 76. Pp. 122. (Berlin und Wien: Urban und Schwarzenberg, 1922.) Grundzahl: 4·8 marks.

THE new section of Abderhalden's invaluable "Handbuch der biologischen Arbeitsmethoden" contains a very useful résumé of methods for the study of digestive secretions in the lower forms, an account of the technique of gonadectomy and transplantation of germinal tissue in insects, together with a rather longer review of experimental procedure in the study of pigmentary responses. This section, by Dürken, suffers, like the author's recent "Einführung in die Experimentalzoologie" (1919), from a complete disregard of the large volume of experimental work on amphibian metamorphosis and the illuminating observations on colour response which have emerged from it during the past eight years; consequently it deals exclusively with methods for studying factors which induce pigmentary responses rather than the mechanism which co-ordinates them. Perhaps it is inevitable that such omissions should occur owing to the economic handicaps under which scientific workers are pursuing their labours in Central Europe at the present time. Still, it is difficult to believe that the author of the "Methoden zum Studium des Pigmentwechsels" had no opportunities of consulting the extremely important work of Spaeth, Redfield, Smith, Allen, Laurens, and Swingle, none of whom is mentioned in his survey, though there have been since 1918 few numbers of the *Journal of Experimental Zoology* which do not contain some contribution to the physiology of pigment response in amphibia, reptiles, or fishes.

Infant Mortality. By Dr. Hugh T. Ashby. Second edition. (Cambridge Public Health Series.) Pp. xii+224. (Cambridge: At the University Press, 1922.) 15*s.* net.

BY "infant mortality" is meant the ratio which the number of infants who die in any one year bears to the number of births in that year. The rate for the country generally remained more or less stationary until 1905, since when, however, it has steadily decreased, so that during the last two or three years it has been only about half that which obtained in the late nineties of last century. Infant mortality is of enormous national importance, for with the present low death-rate, which it will be difficult in the future materially to reduce, and a falling birth-rate, now only about two-thirds what it was at the end of last century, the maintenance of our population will largely depend upon the survival of as large a proportion as possible of the infants born.

The appearance of a second edition of Ashby's "Infant Mortality" is therefore opportune. The practical side of the question has been kept in view throughout, and purely medical technicalities have been omitted. The condition is a very complex one, but an attempt is made to ascertain its main causes; one of these, summer diarrhœa, has been practically suppressed. The number of still-births and the mortality during the first week of life are still far too high, and their causes merit further investigation. Maternal mortality shows an actual increase of late, and needs to be taken seriously in hand.

The author has skilfully marshalled his facts, and the chapter on the means by which infant mortality may be further reduced gives an excellent summary of the subject.

Pests of the Garden and Orchard. By Ray Palmer and W. Percival Westell. Pp. 413+47 plates. (London: Henry J. Drane, Farringdon Street, n.d.) 25*s.* net.

IN the work under notice the authors have aimed at meeting the needs of practical agriculturists and horticulturists by collecting into one book all the available information on plant pests and diseases necessary for their guidance. Insects and other animals, fungus diseases and weeds, are all dealt with categorically under their separate headings, a short description and the methods of treatment being given in each case. Many of the numerous illustrations are very clear, but others are scarcely sharp enough to prove efficient aids to identification.

Among other useful features special attention may be directed to the detailed formulæ for sprays, with antidotes to the various poisons used in their composition, and also to the identification and spraying tables for insect pests and plant diseases. For identification