disease acquired during childhood, and true cretinism, which is congenital; for the prognosis and factors governing successful treatment are different. There is, too, a distinction to be made between endemic and sporadic cretinism. In the case of cretinism it is pointed out that the success of treatment depends upon the time of life at which it is begun and the adequacy with which it is maintained. Especially in the sporadic cases should the attending physician be alert to detect it early and carry out treatment promptly and persistently.

The iodine response in toxic goitre is one of its characteristic features. An amelioration of all symptoms usually begins in a few hours, and the metabolic response runs parallel; its magnitude and rate can be predicted with fair accuracy. It takes about ten days to reach its completion—that is, to get the patient fully iodinized. Anatomically there is diminished congestion of the gland and involution occurs; there is increased storage of colloid and the epithelium returns to a state resembling the resting. Apparently iodine obstructs the delivery of hormone from the thyroid, but the morbid stimulus to the gland continues to work. The minimum dose of iodine which will produce the full characteristic response is about six milligrammes a day. Larger doses are usually given, as there is no objection and the risk of underdosage is eliminated. Iodine administration is a necessary part of preparation of the thyrotoxic patient for operation. In no toxic case should an operation be done until the patient is fully under the influence of iodine. Iodine is very effective in the control of the milder forms of thyrotoxicosis residual to, or persistent after, operation. Indeed, in specially selected cases it may be enough to use iodine as a treatment by itself. Such cases are a very small proportion of the total, and in Professor Means's series over the years 1932–5 inclusive amounted to but 1.3 per cent. of the whole. *X* rays are an effective form of treatment in some cases, but subtotal thyroidectomy in the fully iodinized patient is at the moment the best treatment that can be offered. It gives a better chance of prompt and permanent cure than any other therapy now available. In cases coming to operation the importance of adequate preparation, careful anaesthesia, and team-work among the surgeons is emphasized. There is much to be said for preferring the slow, careful, bloodless technique which preserves the parathyroids and nerves by exposing and avoiding them. There are various complications of toxic goitre—cardiac insufficiency, the so-called toxic storms, psychoses, and glycosuria—which crop up in large series of cases in sufficient numbers to allow of generalization. The whole class of nodular, adenomatous goitres is in an entirely different category; their treatment is guided by the presence of thyrotoxicosis, of tracheal compression with pressure symptoms, or of any features suggesting malignancy. Malignant goitre is not rare, and can be cured only by early treatment.

The remaining chapters of this most interesting and instructive book deal with anomalies of the thyroid, thyroid administration in diseases other than those of thyroid origin, and the possibility of affecting the course of other diseases by total thyroidectomy. Readers will find Professor Means's book a mine of information, compiled with judgment and offering a statement of our knowledge which conforms with the most advanced thought of present-day medicine. The author is to be congratulated on the open-mindedness of his conclusions, and he would be the first to acknowledge, indeed to expect, that many of them will be modified as the result of further work.

PLANT VIRUS DISEASES

A Textbook of Plant Virus Diseases. By Kenneth M. Smith, D.Sc.Manch., Ph.D.Camb. (Pp. 615; frontispiece, 101 illustrations. 21s.) London: J. and A. Churchill, Ltd. 1937.

Dr. Kenneth Smith has produced another book on plant viruses, and this one, as its title implies, is concerned with the diseases which these agents produce. Naturally it is not a book which will appeal to the general medical public; it is not intended for them, but for the plant pathologist. And for the same reason it is quite impossible for anyone not possessed of a knowledge of plant diseases to review such a book critically. All that can be done is to give some idea of its scope and to take the facts on trust, seeking comfort in the thought that the author's eminence in this branch of plant pathology is ample guarantee of the book's factual content. One gathers from the preface that Dr. Smith was at some pains to arrive at a satisfactory method of classifying these plant viruses. Eventually he decided on the plan of naming them after the host plant most commonly affected—using the Latin and not the popular name—and numbering the different viruses attacking the same host. Thus tobacco mosaic virus becomes *Nicotiana virus 1*, speckled tobacco mosaic *Nicotiana virus 2*, and so on. This method appears to work quite well, and arranged in this way the various plant viruses and the diseases they produce are described according to a common plan. The first part of each section is devoted to a consideration of the characters of the virus, its mode of transmission and its host range, while the second part is concerned with the diseases caused by the virus and such important questions as the geographical distribution of these diseases and their control. Chapter VIII is concerned with the insects responsible for the transmission of these virus diseases, and it constitutes a very valuable portion of the book. The last chapter contains brief references to plant diseases suspected of being of virus origin, and the book closes with an appendix in which the most characteristic symptoms of the various diseases on their more important host plants are given in tabular form.

The book is well printed, contains numerous illustrations, and has both a subject and an authors index. In addition a list of references is appended to each chapter which cannot fail to be of value.

PHYSIOLOGY

Physiology in Modern Medicine. By J. J. R. Macleod. Eighth edition. Edited by Philip Bard. (Pp. 1,051; 355 figures; 103 tables. 36s. net.) London: Henry Kimpton. 1938.

The seventh edition of the late Professor J. J. R. Macleod's *Physiology in Modern Medicine* appeared in 1935 shortly before his untimely death. That an eighth edition should have been called for so soon is in itself a testimonial to its usefulness in the past, but with the author's decease his book has suffered a change. Professor Bard, the new editor, indeed states that "little of the seventh edition remains. The greater part of the book has been entirely rewritten," and that by nine individuals. With the great growth of physiology this may be inevitable but nevertheless regrettable. Even in the last edition of Michael Foster's *Textbook of Physiology* much preparatory work was done by others, but the whole bore the imprint of his mind, as unmistakable as the brush-work of an old master. This is hardly possible to-day. But this book