evidence of co-ordination. Many reiterations of summarized statements might have been avoided by cross-references, and an editor might have discovered, for example, that in spite of repetitive statements about propylthiouracil the chemical formula had not been given. The illustrations are a curious mixture of the frankly popular, such as the frontispiece, and the technical. Some of the sections are competently written; but each author seems to have had a different view of the educational level of his potential reader.

The chemistry of the steroid hormones is reviewed in the tight and abbreviated style associated with the "Annual Reports on the Progress of Chemistry" (and, rather surprisingly, the system of nomenclature is one abandoned by the Chemical Society four years ago). Dr. C. W. Emmens contributes a brief chapter on "Standardisation", but it is disappointing to find that in at least one instance, adrenocorticotrophic hormone, the information is far from up to date—in fact, less so than in the book on hormone assay which the same author edited and which was published in the United States in 1950. There is a section on "Action and Uses", perhaps necessarily superficial, and a chapter on "Pharmacy". The section on "Physiology" is an example of the worst type of scuffling and inaccurate compression. This may be illustrated by one quotation. Of the adrenal cortex it is stated: "Twenty-eight crystalline steroids have been isolated from the cortex. In 1934 Kendall *et al.* isolated a crystalline substance capable of maintaining the life of adrenalectomised animals. In 1936 Reichstein obtained from the adrenal cortex a sterol with androgenic properties which he named androsterone. Ingle isolated seven compounds which were effective in relieving different conditions associated with adrenal cortical deficiency, one of the most active being deoxycortone". It would be difficult to find a parallel to such a concentration of misrepresentations of facts.

It would be unfortunate if a book of this quality, appearing under the patronage of a scientific society of standing, should be taken to represent British knowledge and achievement in endocrinology.

R. K. Callow

PROTECTION OF COTTON IN PEACE AND WAR

Microbial Decomposition of Cellulose

With Special Reference to Cotton Textiles. By R. G. H. Siu. Pp. xi+531. (New York: Reinhold Publishing Corporation; London: Chapman and Hall, Ltd., 1951.) 80*s*. net.

FEW textile problems owe so much to the expansion of our knowledge of cellulose and the fibres of which it is the major component as the growth of micro-organisms on cellulosic textiles. It is only necessary to compare the information available when the Fabrics Co-ordinating Research Committee of the Department of Scientific and Industrial Research began, in 1920, the first organized attempt to ascertain the causes of decay of cellulosic fibres, and to assess the value of preventive measures with the extensive literature of to-day, in order to realize the progress that has been made in the intervening period.

In peace-time, the textile technologist is content to protect cellulosic textiles against the growth of moulds at the humidities and temperatures to be expected during transport to, and storage in, tropical climates. The conditions rarely permit the growth of bacteria or even of the moulds which decompose cellulose, so that his main concern is to prevent disfigurement. In service, chemical tendering by air, light and moisture is a more potent source of damage than microbial tendering, with the notable exceptions of fishing nets and lines and filter cloths.

In time of war, particularly in jungle warfare, use may be severe enough to reverse the relative importance of chemical and microbial tendering. This prospect has dominated the approach of the United States Army Quartermaster Corps to the problem of lengthening the useful life of textile equipment and has, naturally, tended to colour Dr. R. G. H. Siu's treatment of the subject. Nevertheless, Dr. Siu has earned the thanks of every worker in the field for undertaking the herculean task of summarizing a more considerable body of work than the title of his book would suggest. He covers successively the decomposition of cellulose in Nature; the structure and properties of cotton fabrics; the organisms which have been isolated from them; the microbial degradation of cellulose; and methods of preventing microbial attack, including chemical modification.

The description of the mechanical and chemical processes applied to cotton might have been omitted; it is unnecessary if the reader is familiar with textile technology, and inadequate if he is not. For the rest, either by choice or by force of circumstance, Dr. Siu has provided a comprehensive rather than a critical account. Thus, in Chapter 3 he stresses unduly the occurrence of chemical damage during the mechanical processing of cotton. In Chapter 4, the lists of cellulolytic and non-cellulolytic organisms would have been more valuable if the taxonomy had been brought up to date. In Chapter 5, it is not made clear why the humidity of the atmosphere surrounding a textile may be more important than its moisture content from the point of view of mould growth. More attention might also have been devoted to the greatly varying moisture requirements of different moulds, particularly as some of those which decompose cellulose develop freely only at a very high relative humidity. In Chapters 6 and 7, the comprehensive account of the mechanism of the degradation of cellulose is inevitably rather speculative, for many of the observations are contradictory and often lack adequate descriptions of experimental materials and techniques.

The remaining chapters (8–12) are accounts of methods of biological testing and of the prevention of microbial attack, either by the use of antiseptics or by conversion of the cellulose into suitable derivatives. The search for new antiseptics is described very thoroughly; the author's reliance on the soil burial test as the criterion of efficiency leads him, however, to reject treatments which have proved valuable for specific purposes and to accept treatments which may be open to objection on other grounds. As the soil burial technique is accepted as a satisfactory prediction of field behaviour, it is disappointing to find no assessment of the relative importance of microbial and chemical tendering in the many practical uses of cellulosic textiles.

Dr. Siu has provided a book of exceptional value to the specialist in any section of the field he has covered; its merit is enhanced by the very comprehensive bibliographies appended to each chapter. It is not, however, a book for the industrialist who seeks a ready guide to the solution of his problems.