

"Decaying vegetation under an ardent sun generates miasma, the consequences being fever, dysentery, and not infrequently cholera". Kendrew rarely or never comments upon, criticizes or corrects the laymen he quotes, and the effect is occasionally to give to his text a naïveté that is at once charming and disconcerting.

The book remains devoid of any attempts to classify climates generically, either in terms of an established taxonomy like those of Köppen and Thornthwaite, or in terms of the general circulation. The contents are treated in an alphabetical order (except for Australia and Antarctica, which unaccountably appear last). The entire effect is that of a guide-book for world climate, written in homely terms that render the text accessible to any educated reader. It is a tribute to Mr. Kendrew's achievement that this easy style, this freedom from technical parlance, in no way reduces the value of his book to a professional reader. Mr. Kendrew is to be congratulated on the longevity of his book, and we confidently expect, in due course, a fifth and perhaps subsequent editions.

F. KENNETH HARE

RHEOLOGY OF FOODSTUFFS

Foodstuffs, their Plasticity, Fluidity and Consistency Edited by G. W. Scott Blair. (Deformation and Flow: Monographs on the Rheological Behaviour of Natural and Synthetic Products.) Pp. xv+264+12 plates. (Amsterdam: North-Holland Publishing Co.; New York: Interscience Publishers, Inc., 1953.) 25 florins.

THIS book, like another in this series, is a collection of short monographs (eight chapters, varying in length from eleven to forty-five pages) devoted to the rheology of foodstuffs. The subject-matter is, as the editor states in the introduction, "... work at a comparatively early stage in scientific development" and a study which "... is still almost entirely at the empirical stage of development". It is not surprising, therefore, that much of the book is concerned with the results of these empirical rheological tests. The necessity for such tests is not questioned where the criterion of quality is frequently a subjective assessment of rheological properties made by the consumer on the finished product and where, in addition, many such similar judgments are made by the craftsmen in the industries concerned in order to pass on to the next process in manufacture. This book, therefore, summarizing as it does the existing state of practical rheology in some of the food industries, is a welcome addition to the literature. It is not, however, just a simple compilation of the results of the empirical tests; while it includes a description of these tests and the results obtained from them, every effort has been made to collate these results with other changes, physical, chemical and biochemical, taking place to give a complete, albeit qualitative, picture of the various processes occurring during manufacture.

The first chapter, on starch, by J. Hofstee and A. H. A. de Willigen, deals with pasting of potato starch and the properties of starch pastes in general. The mode of expression is at times unusual and the insert material is printed in different founts for no apparent reason. The following chapter, on cereals, by D. H. Greup and H. M. R. Hintzer, is devoted to

the bread-making process and to the properties of dough. It presents a particularly lucid picture of the current state of knowledge in this field.

A short chapter on the rheology of milk, cream, ice-cream mixes and similar products, by G. W. Scott Blair, is primarily concerned with the viscosity of milk and the consistency of cream. The next two chapters—the consistency of butter, by H. Mulder, and the rheology of cheese and curd, by M. Baron and G. W. Scott Blair—are very similar in their approach: both give careful consideration to the effects of the processing on the finished products, in addition to discussing the various test methods available.

The rheology of honey, by J. Pryce-Jones, describes the effect of temperature on the viscosity of Newtonian honeys and the measurement of thixotropic and dilatant properties of the non-Newtonian honeys. The next chapter, on the rheology of certain miscellaneous food products, by H. G. Harvey, includes a summary of much of the work published in privately circulated bulletins by the British Food Manufacturing Research Association. Owing to the large number of products discussed, this monograph is not as valuable as some of the earlier ones.

The last chapter, on psycho-rheology, by R. Harper, reviews the work on subjective judgment of the rheological properties of some of the products dealt with in the earlier chapters of the book. The latter part of this chapter, devoted to factor analysis, is not clear, at least to one who is not familiar with the technique.

The literature references are collected together at the end, and these are followed by both author and subject indexes. In the latter the bold face type (the most important references) is not always clear; nor is the book free from typographical errors. The photographic reproduction is good, and the diagrams clear.

J. E. CAFFYN

ECONOMICS OF FUEL

The Price of Fuel

By I. M. D. Little. Pp. xiv+197. (Oxford: Clarendon Press; London: Oxford University Press, 1953.) 12s. 6d. net.

AS the author explains in the introduction to this volume, a book on fuel prices might well appear to need some justification, especially as the argument is largely concerned with an imposition of an increase in the price of coal. Indeed, many pages of close and able argument are devoted to an attempt to prove that this increase of price should be £1 per ton.

The study was written in the belief that the Ridley Committee had failed to deal with the pertinent evidence in support of this contention in an effective manner. Although a business man struggling to retain his foreign markets against rapidly growing foreign competition may be horrified by many of the arguments put forward, the book is a challenging analysis of the many complicated factors which must enter into any price structure concerning so important a national asset as coal.

The captious critic would say that it is a book for the planners, and would urge that the fuel world should be left alone to work out its own salvation. The author argues that the price of coal should be such as to permit of sales abroad and to supply a larger percentage of European consumption. The