

noticed, and the early history of Benin is not forgotten. As has been said, the civilizations which grew up along the east coast of Africa and the (to some extent) contemporary Rhodesian buildings are treated at considerable length. The history of the early Congo is scarcely mentioned, nor is that of Angola, though the publications of the Diamond Company there have shed some light on its obscure part. The Union of South Africa, except for a brief account of Mapungubwe, is also omitted.

These gaps (geographically) are numerous, but it is difficult to see how everything could have been included in one short volume. What the author has given us is excellent reading, and he is to be congratulated on attempting what for many would have seemed impossible. It is a work which many people who care about Africa will warmly welcome.

M. C. BURKITT

IMPORTANT RAW MATERIALS

Cellulose Pulp and Allied Products

By Dr. Julius Grant. (Incorporating the third edition of "Wood Pulp".) Pp. xvi+512. (London: Leonard Hill (Books), Ltd., 1958.) 50s. net.

REFERENCE books of any size are now usually assembled by editors from chapters written by different authors—each an expert on his own subject. "Cellulose Pulp" is a survivor from an older tradition, and is the work of one author. This gives a uniformity in style, lacking in a collection of edited chapters, but anyone essaying a subject with as vast a literature as cellulose pulp sets himself a difficult task.

This book incorporates the third edition of "Wood Pulp", which was first published in 1938. Wood is quite the most important source of cellulose pulp (about 90 per cent) of the total and most of the book is concerned with the manufacture of wood pulp. The central chapters cover this well and should be of use to the general reader who is not 'highly technical' in accordance with the author's wishes expressed in the preface. Chapter 2 on history is well done, but the author could have made more of the history of wood pulp technology itself. Without wood pulp paper would have been so scarce that Forster's (Compulsory) Education Act of 1870, and similar measures in other countries, would have been useless. It is no good teaching children to read and write without adequate paper supplies, and the figures quoted by the author for paper consumption and literacy in Asia and Africa show that the problem is still with us.

Appropriately enough the main untapped source for pulp is in the tropical forests, but it is not easy to get sound information about them quickly as an enormous variety of trees grow in mixed stands and they all have different pulping properties. There is a serious sampling problem, and it is also very difficult to forecast the nature of the secondary growth, which is most important if pulping is to be put on a continuous basis.

In briefly relating his subject to cellulose technology in chapter 3 the author has run into some difficulties. The explanations of 'micelles' on page 37 and 'tracheids' on pages 49 and 50 are so short that they are misleading. Chapters 20, 21 and 22 on uses of cellulose also suffer from enforced brevity. The rayon and allied industries, and the plastics industry too, may be surprised at the small space given to their special

problems. In most parts of the book sufficient references are given to enable the scientific reader to look up detailed information elsewhere, but the references to the uses of pulp are thin considering the variety of processes mentioned.

These, however, are not major issues and it is hoped that the book will be widely read for its manufacturing section. Too few people realize how important pulp technology is to our civilization.

F. LYTH HUDSON

THE CASE FOR EXTRA-SENSORY PERCEPTION

The Sixth Sense

An Inquiry Into Extra-Sensory Perception. By Rosalind Heywood. Pp. 224. (London: Chatto and Windus, Ltd., 1959.) 21s. net.

IN this volume Mrs. Heywood, an active member of the Council of the Society for Psychical Research, has collected a mixed but well-arranged selection of those cases which seem to her and doubtless to many others to offer good evidence for extra-sensory perception. She is convinced that both in England and in the United States experiments have been conducted under rigid scientific conditions which have shown that it is possible for one person to become aware of another's thoughts and feelings where such information could not in any circumstances have been acquired by sensory means.

Beginning her study with a glance into the past, she briefly summarizes the early work of the Society for Psychical Research, stressing the value of its experiments and conclusions without, however, adequately dealing with the objections to its methods which were often voiced at the time. Proceeding with her analysis she discusses the work carried out on the problem of mediumistic communications, especially those associated with the names of Mrs. Piper, Mrs. Leonard and Mrs. Coombe-Tennant. The very puzzling "Cross-correspondences" are then dealt with, and the two chapters devoted to them form an excellent introduction, although the author fails to appreciate the reason why this material has never attracted the attention that it might deserve if we knew all the facts and not only some of them. The study is concluded by a short discussion of various quantitative experiments and a short summary of some of the explanations and hypotheses that have been offered.

As a popular and necessarily brief introduction to extra-sensory perception this book is to be recommended, although always with the proviso that the facts are as stated and that further knowledge of the conditions would confirm the interpretation put upon them. It is this lingering doubt about the accuracy of the records that tends to prevent so many scientific men from taking many of the statements of psychical research workers too seriously, and this hesitation is often better justified than at first appears.

In this book Mrs. Heywood has done little to allay such doubts. What she has done is to present a further stimulating and lucid study of extra-sensory perception which may prompt independent inquirers to initiate experiments on their own account, but only after an intensive study of the subject and of the pitfalls with which it abounds. E. J. DINGWALL