

The Milky Way

By Bart J. Bok and Priscilla F. Bok. (Harvard Books on Astronomy.) Second edition. Pp. vi+224. (London: J. and A. Churchill, Ltd., 1946.) 18s.

WRITERS on astronomical subjects find it comparatively easy to give a popular or semi-popular description of such a parochial affair as the solar system, but not so easy to provide a similar description of the Galaxy. The book under notice is undoubtedly the best of the semi-popular type that has been produced on this subject, and it presents the reader with an excellent account of the methods used to explore the Milky Way and to fathom some of its secrets. Here we have descriptions of the means by which astronomers ascertain stellar distances, masses, sizes, temperatures, etc., and most of these can be easily understood by those who have little or no background in mathematics or physics. They will read the interesting story of our Galaxy—just one of millions—the longest axis of which is more than 100 million light-years, the number of stars probably exceeding 100,000 million. Some of these stars are so large that the sun could be placed at the centre, and the orbit of Mars would lie well inside their outer layers, while the whole system is moving around its centre, the speed of the sun being 150 miles a second and the time required to complete a revolution 200 million years.

It must not be assumed that all the secrets of the Milky Way have been laid bare; so much still remains to be done that it would be true to say that our knowledge of the Galaxy as well as of the extragalactic systems is very limited, and many years of patient research will be necessary before it is possible to settle a number of controversial points. Readers of this book will probably form the opinion that far more remains to be done than has yet been accomplished.

The work is illustrated with ninety-three figures, two of which are large-scale photographic maps of the Milky Way and thirty of celebrated astronomers whose investigations have been responsible for advancing our knowledge of the Galaxy.

M. DAVIDSON

Field Archæology

By R. J. C. Atkinson. Pp. x+238+8 plates. (London: Methuen and Co., Ltd., 1946.) 12s. 6d. net.

IT is all to the credit of British archæology that its technique of field-work and excavation should have been built far less from theoretical principles than from practical experience, won gradually in the field itself by the men and women on the job. But matters have latterly been coming to a point where the fruits of this experience required gathering together, for the benefit both of beginners and indeed of the men and women on the job themselves. Mr. Atkinson's book meets this requirement admirably. A little more than two hundred pages long and of convenient pocket size, it is exactly suited to the part of archæologist's 'companion', in which it should be assured of a long career of usefulness and many editions.

The author is still young, but he writes throughout from personal knowledge of what he is discussing, gained mainly in the region of Oxford, where he is now assistant keeper of antiquities in the Ashmolean Museum. True, workers in the regions of sterner physique in the north and the farther west may here and there have things to add; but the book abounds

so richly in practical information and quietly shrewd advice that it is really indispensable for anyone pursuing out-of-door archæology, no matter where, nor whether professionally or as a constant or occasional hobby. Field-work and excavation, surveying, recording and photography, interpretation of evidence and the preparing of reports for publication are all treated thoroughly yet simply, and the plates and the author's diagrams are altogether excellent.

C. F. C. HAWKES

Plastics Applied

Being a Survey of Patent and Technical Literature with Collected Data of Interest to Users of Plastics in all Branches of Industry. Edited by Dr. V. E. Yarsley. Second edition. Pp. 528+lvi+8 plates. (London: National Trade Press, Ltd., 1946.) 42s. net.

THIS handsome volume represents the present stage in the development of plastics in so far as applications are concerned. Naturally, therefore, one would not expect to find a great deal relating to fundamental research. After an introductory review, a good account of the numerous uses of plastics in industry follows. Indeed the range is amazing: shipbuilding, photography, textiles, insulation, to mention but a few of the actual or potential uses. There are two chapters on welfare and safety problems, which will be welcome, and, at the end, a number of useful tables.

Two points of wide interest may be singled out; one is that with so much replacement to do in all branches of national life, the opportunity (and responsibility) for good design should be fully realized by manufacturers; the other stresses the manifold possibilities which occur in starting with substances almost universally colourless. The implication is that almost every conceivable hue should be within the grasp of designers and artists.

The compilers have managed to produce a book obviously suitable for consultation in the office and factory which is, at the same time, dignified and appropriate as a work of reference. F. I. G. R.

A Bibliography of Statistical Quality Control

By Grant I. Butterbaugh. (Published for the Bureau of Business Research of the College of Economics and Business.) Pp. viii+114. (Seattle, Wash.: University of Washington Press, 1946.) 1.50 dollars.

STATISTICAL methods of controlling quality of output have now been tried out in many branches of industry, the War in particular having provided a strong impetus with its demand for large-scale fine-quality production. The literature of the subject has become bulky, and contains records of interesting ideas and extensive practical experience (together with, unfortunately, much wearisome repetition of the same first principles). This bibliography covers literature published up to 1945. Most of the entries are followed by a brief synopsis or a reference to published reviews. The compilation has been made carefully, and will be of service to many "statisticians, teachers, students and businessmen directly responsible for quality control". It is a pity that a subject index has not been included, but the book is not too large to be read completely by anyone searching for particular applications. The theory of quality control is developing rapidly, and it is to be hoped that up-to-date editions of the bibliography will be available at not too long intervals. F. J. ANSCOMBE