

radar; this includes relaxation oscillators and sweep generators.

The book is written in a clear style and is liberally illustrated, and a number of problems have been included at the end of each chapter. It should provide a useful text for students in electrical engineering.

J. A. SAXTON

Nandi Work and Culture

By G. W. B. Huntingford. (Colonial Research Studies No. 4.) Pp. iv+126. (London: H.M. Stationery Office, 1950.) 8s. 6d. net.

THIS is a typescript copy of six chapters from a report written in 1947-48 for the Kenya Government on the Nandi, a subdivision of the Nilo-Hamitic group of tribes of Kenya and Uganda Colonies. This study deals respectively with Nandi traditional history, with their topography and population statistics, their cattle culture, their economic activities, their culture contacts with their neighbours, and with some of the culture conflicts brought about by colonial rule. The rest of the report dealing with the social and political life of the Nandi will be published elsewhere under private auspices.

This study is a mine of information on both practical administrative problems like building foot-bridges of local materials, or local cattle diseases, and on more obviously ethnological matters. These range from "Azanian" remains, cattle horn shapes and the native names for them, the Kaptich system of cattle distribution between relatives, to comparison between Kavirondo and Nandi agricultural implements or between old and new types of Masai and Nandi spears.

There are no less than five excellent maps, twenty-two clear and well-drawn figures in the text, the paragraphs are numbered consecutively from 1 to 315 and there is a good index with paragraph references. Would that all anthropological monographs were presented in such a clear and direct form.

The Colonial Office states in an introductory note that the publication is of a private character, the views expressed being those of the author and not of any government authority.

G. I. JONES

The Design of Experiments

By Prof. Ronald A. Fisher. Sixth edition. Pp. xv+244. (Edinburgh and London: Oliver and Boyd, Ltd., 1951.) 12s. 6d. net.

IN 1935, when "The Design of Experiments" was first published, statistical text-books gave scant attention to questions concerning the design of a scientific inquiry: performing calculations appropriate to data placed before him was regarded as a statistician's sole duty. To-day, every book on the scientific applications of statistics gives prominence to the design of experiments and sampling inquiries: the statistician's contribution to the design of an investigation is recognized as often far more important than his function in analysis. This change is largely due to the influence of R. A. Fisher's work.

Now that several systematic treatises on experimental design exist, why should this pioneering book continue to be issued substantially unchanged? (The sixth edition differs from the fifth only by the addition of a few paragraphs explaining more clearly the use of interactions in estimating error variances.) The answer: Just because Fisher is not tied to a systematic development, he is able to give by far the most stimulating introduction to design and its relationship with the whole corpus of applied statistics. Despite

a style of presentation that is seldom found easy by a novice, his book is a remarkable aid to the understanding of the basic principles of design. Moreover, even paragraphs that were written for the first edition are pregnant with ideas for the future: for example, in most fields of science, too little attention has yet been given to that cost accountancy of experiments (in relation to the quantity of information obtained) which Fisher believes capable of enormously increasing the efficiency of research programmes. In 1935, he stated that immense waste of resources in futile experimentation had resulted from failure to utilize past experience in order to assess the precision attainable in future experiments; that statement is repeated in 1951, and, if still true, is a reflexion of the extent to which the lessons of this book have still to be learnt.

D. J. FINNEY

Ireland

Its Physical, Historical, Social and Economic Geography. By T. W. Freeman. Pp. xv+555+16 plates. (London: Methuen and Co., Ltd.; New York: E. P. Dutton and Co., Inc., 1950.) 32s. 6d. net.

PROBABLY no book on Ireland has previously been written on this scale. It is so searching in its array of facts that one wonders if anything of importance can have escaped notice. The industry demanded in its compilation has been great, and the result is a voluminous and worthy work of reference, but not an exceptionally readable one. The first half treats of the distribution of features in Ireland as a whole, while the second half is detailed regional geography of the twelve major regions and the approximately ninety sub-regions. It is here, perhaps, that the survey is a little too discursive. The boundaries of many of these divisions are often difficult to define, and attempts to draw them give a false insistency on the individuality of the region. The author, however, is aware of this difficulty. There is also a long section on the historical geography of Ireland. The bibliographies attached to every chapter are exhaustive, and there are about a hundred text maps. The long index with its lack of classification under each entry is practically useless.

R. N. R. B.

Science in the School Garden

By Mary A. Johnstone. Pp. xiv+176. (London: Macmillan and Co., Ltd., 1951.) 4s. 6d. net.

MOST of the many gardening books which appear each year are badly written and based upon the prejudiced impressions of someone with a wealth of so-called practical experience which proves to have little general application because of the limited character of its observation. It is a pleasure, therefore, to recommend Miss Johnstone's little book, which might more appropriately have been called "Gardening, from a Scientific Point of View". The work is a careful mixture of the author's own gardening observation together with objective accounts of plant structure and physiology, the work of insects, simple soil science, and the ecology of gardens. Emphasis is always placed upon the need for experiment and investigation so that none of the traditional gardening beliefs may be accepted without challenge. Of the many useful chapters one on the gardener and the weather is specially commendable. So, too, is the last chapter which, under the intriguing title of "Odds and Ends", presents the reader with some useful advice on issues which can be irritating to the novice gardener. The book is well illustrated and the line-drawings are clear and illuminating. It should be welcomed by gardening scholars of all ages.

T. H. H.