British Inventions

By Dr. F. Sherwood Taylor. (British Life and Thought Series: Published for the British Council.) Pp. 44+16 plates. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1950.) 1*s*. net.

IT is a tribute to the author's judgment and ease of expression that so much has been compressed into such a readable compass. The result is far more than a mere catalogue of British inventions; Dr. F. Sherwood Taylor traces their origins in the needs and background of contemporary life. For example, Britain's obvious dependence on the sea is reflected in the multitude of marine inventions.

The sequence that the author has adopted contributes to an understanding of the development of invention and its relation to scientific discovery. After an introduction, with special reference to Francis Bacon, there follow sections on scientific instruments, textile machinery, machines to make machines, and the steam engine. The latter part of the book explains the rise of modern engineering and the distribution of power and has a special section on chemical manufactures.

This welcome additional volume to the British Council's series on "British Life and Thought" concludes with a survey of instruments in the nineteenth century and of British invention in modern times. Among the numerous excellent plates, there are three photographs—of the late Lord Rutherford, Sir Robert Watson-Watt and Air-Commodore Sir Frank Whittle—a happy reminder of the contributions that Great Britain has made to fundamental research of world-wide significance.

Differential Algebra

By Prof. Joseph Fels Ritt. (American Mathematical Society: Colloquium Publications, Vol. 33.) Pp. viii+184. (New York: American Mathematical Society, 1950.) 4.40 dollars.

IN 1932 the author published "Differential Equations from the Algebraic Standpoint" (reprinted in 1948), which dealt with differential polynomials and algebraic differential manifolds. Since 1932 much progress has been made, so the author has prepared a new exposition, to which he has given the title of "Differential Algebra", which emphasizes that it deals with the three operations of addition, multiplication and differentiation. The problems dealt with are really closely allied to those of the usual theory of differential equations, but they are disguised by the abstract nature of the treatment. This treatment has been adopted so as to separate algebraic from analytical methods; but at times it seems rather unnatural, and the book is not easy reading.

Statistics

An Intermediate Text Book. By Dr. N. L. Johnson and H. Tetley. (Published for the Institute of Actuaries and the Faculty of Actuaries.) Vol. 1. Pp. xii+294. (Cambridge: At the University Press, 1949.) 20*s*. net.

THE primary purpose of this book is to satisfy the needs of actuarial students studying for the examinations of the new syllabus of the Institute of Actuaries; the first section of this syllabus is covered in this volume, and the second section is to be dealt with in the companion volume. The first four chapters introduce the student to the subject-matter of statistics and to the methods of handling data by means of diagrams, moments and correlation techniques. A section on statistical inference introduces three chapters on probability, and the last two chapters are on large-sample statistical tests.

The text is well written, and, in particular, the notion of a statistical test is made very clear, though perhaps estimation is too briefly discussed. The exercises are, in general, too difficult, even when some hints and answers are given. The actuarial student will probably be well served by this book. It is difficult to say how well other classes will appreciate the book until we see the second volume. At the moment, the omission of small-sample theory and the preoccupation with some matters make the work less interesting than it might have been.

D. V. LINDLEY

Birds of the Coast

Written and Illustrated by C. A. Gibson-Hill. Pp. xxxii+216+16 plates. (London: H. F. and G. Witherby, Ltd., 1949.) 10*s*. 6*d*. net.

THIS volume follows the large handsome pictorial introductory volume, "British Sea Birds", by the same author and publisher; but it is pocket size and contains more reading matter. Even so, it is difficult to compress into two hundred small pages such a considerable and potentially intractable subject, since in Great Britain, a land of coasts and islands, almost every bird could pass the author's somewhat ambiguous test of what constitutes a coastal species. The author would have made a more useful contribution had he disciplined himself to describing the essentially littoral species, and giving more information about these, instead of introducing rare and inland-breeding species (for example, cream-coloured courser, pratincole, stone-curlew) and many others which only visit the shore occasionally in winter. There are several omissions from the distributional maps. The photographs are excellent, and the author's clear diagrammatic sketches of plumage markings are most useful. This work can be recommended as a pocket-size introduction to the birds seen on a seaside holiday.

Bees, Flowers and Fruit

The Story of Insect–Plant Relations. Written and Illustrated by Herbert Mace. Pp. 184. (Harlow: Beekeeping Annual Office, 1949.) 8*s*. 6*d*. net.

THE author of this book, who is a well-known beekeeper and writer on apicultural subjects, has had a life-long interest in bee plants. His present work is written on popular lines, and the greater part is devoted to flowers and pollination with special reference to the role of the hive bee. Mr. H. Mace has drawn freely from Knuth's monumental and comprehensive work, "A Handbook of Flower Pollination", as he readily admits. As Knuth's work, in three large volumes, is not likely to be available to most beekeepers or amateur naturalists, Mr. Mace's book should fulfil a useful purpose in rendering at least some of the information more generally available. The chapters on bee pasturage, embodying many of the author's own observations, are among the more useful features of the book.

Some may feel that the title is somewhat misleading, for there is but little information on bees themselves and very little on fruit. Under the latter category notes are given on the nature of the flowers of tree, bush or berry fruits, their degree of attractiveness to the hive bee and their times of flowering. It seems unnecessary to have attempted to include cultural notes in a work of this kind.