

SHORTER NOTICES

An Introduction to the Theory of Functions of a Complex Variable. By E. T. Copson. Oxford, Clarendon Press, 1935. v+448 pp.

Until a few years ago Whittaker and Watson's *Modern Analysis* was practically the only modern British text on the theory of functions of a complex variable. Dienes' treatise on *The Taylor Series* appeared in 1931, Titchmarsh's *The Theory of Functions* in 1932. To these books Professor E. T. Copson of University College, Dundee, in the University of St. Andrews, has added a worthy companion. The book under review stands in some respects fairly close to the Whittaker and Watson model. In particular, it gives ample treatment of the special analytic functions, but with much less bewildering detail. It is more elementary than Titchmarsh's treatise, and does not devote any space to functions of a real variable.

A list of the chapter headings will give some idea of the actual contents: Complex numbers; The convergence of infinite series; Functions of a complex variable; Cauchy's theorem; Uniform convergence; The calculus of residues; Integral functions; Conformal representation; The gamma function; The hypergeometric functions; Legendre functions; Bessel functions; The elliptic functions of Weierstrass; Jacobi's elliptic functions; Elliptic modular functions and Picard's theorem.

The stated purpose of the book is to provide an easy introduction to the methods of the theory of functions of a complex variable, and it seems to be admirably suited for this purpose. The presentation is clear and sufficiently detailed. Difficulties are frequently avoided by restriction of the generality, but the author takes care to call the reader's attention to the existence of more general results and to the place where they can be found in the literature. There are plenty of references in the text as well as suggestions for collateral reading at the end of each chapter. There is also a wealth of interesting and important material tucked away among the many sets of examples.

The typography and make-up of the book are excellent, only the price is repellent.

EINAR HILLE